TECHNOLOGY DEPT.

A National Newspaper for Every Branch of the Industry

Automotive Daily News

CARS · SHOP EQUIPMENT · TRUCKS · AVIATION · PARTS · ACCESSORIES · TIRES

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1929

Marmon Earns $1,150,282 in Half Year; Output Doubled

Indianapolis, Ind., Sept. 26.—Net earnings of the Marmon Motor Car Company for the six months period ended August 31, 1929, amounted to $1,150,282.03, after Federal taxes and all other charges, of which the sum of $61,281.03 was earned during the second quarter, G. M. Williams, president of the company, announced today.

The net result of operations for the six months is in excess of the regular dividends on the common stock for an entire year and is approximately 90 per cent. of the net earnings of the company for the fiscal year ended February 28, 1929, which amounted to $1,271,665.31 after Federal taxes and all other charges.

Shipments of Marmon and Roosevelt automobiles during the six months totaled 21,841 units, representing an increase of approximately 110 per cent. over the corresponding period of last year, and the net sales volume in amount in the same period represented an increase of approximately 48 per cent., the difference in the percentages of increase being due to the lower unit price of the Roosevelt.

During the six-month period just closed the company absorbed in its operations all regular and extraordinary merchandising expense, including the initial advertising of the new Roosevelt car and the expense of increasing its dealer organization, which has been doubled since March 1.

"Considering the greatly expanded dealer organization and the excellent position of the company in general, the outlook for the second six months of our fiscal year is particularly favorable," Mr. Williams said.

HAYES BODY REPORTS NET OF $64,011 FOR SIX MONTHS

New York, Sept. 26.—The Hayes Body Corporation reports for six months ended June 30, 1929, profit of $64,011 after depreciation, interest, etc., but before Federal taxes. Capital stock amounts to 254,808 no-par shares.

Income account of Hayes Body Corporation for six months ended June 30, 1929, follows:—

Gross, $16,073,703; operating costs, $15,994,680; balance, $79,023; other income, $126,932; total income, $205,955; other charges, $15,777; depreciation, $96,822; interest, etc., $29,345; profit before Federal taxes, $64,011.

AVERY OF MURRAY CORP. OFF FOR EUROPE TODAY

Detroit, September 26.—C. W. Avery, president of the Murray Corporation of America, accompanied by Mrs. Avery and their daughter, Anabel, will sail for Europe tomorrow on the Ile de France.

Mr. Avery is going abroad primarily to attend the Paris and London automobile shows. However, while in Europe, they will tour Germany, Switzerland, England and France and will sail for home November 1.

CENTRAL ALLOY STARTS NEW NITRIDING FURNACE

Massillon, O., Sept 26.—The Central Alloy Steel Corporation has completed construction and started operation of the largest nitriding furnace in the world at its Canton works, it is announced by F. J. Griffiths, chairman of the company. The new furnace will be utilized to promote the use of nitralloy, one of the important new alloys being produced by the company under Krupp licenses. The automotive and aviation industries are adopting nitralloy for such parts as valve tappets, wrist pins, gears, steering sectors and crank and cam shafts.

Oldsmobile-Viking Forms Northwest Sales Region; Trevellyan Put in Charge

Lansing, Mich., Sept. 26.—Formation of a new Oldsmobile-Viking sales region and the appointment of Herbert A. Trevellyan, former manager of the Chicago zone, as manager, are announced by D. S. Eddins, vice-president and general sales manager of Olds Motor Works. It will known as the Northwest region, with headquarters in Chicago, and will embrace the Chicago, Milwaukee, Minneapolis, Des Moines, Sioux Falls, S. D., and Billings, Mont., territories.

H. A. Trevellyan

Trevellyan is succeeded as manager of the Chicago zone office by J. J. Young, who has been his assistant. Before joining the Oldsmobile-Viking organization in Chicago in 1927, Mr. Young had been active in the retail automobile business for six years.

Appointment of E. E. McIndoo as manager of the Oldsmobile-Viking Atlanta, Ga., zone is announced also by Mr. Eddins. Mr. McIndoo succeeds J. M. Wilson, who has been transferred to the general sales offices at the factories in Lansing, Mich.

WINDSOR PLANS HUGE DISPLAY AT LONDON

St. Louis, Sept 26.—When the Olympia Automobile Show is held in England next month, the exhibit will be made up largely of American motor cars, among them the Windsor White Prince, which is manufactured by the Moon Motor Car Company of St. Louis. E. H. Serrano, the Moon Company's export manager, has announced that six carloads of Windsor cars have already been shipped, with more to follow. This will make a fairly representative showing for this company.

Back From Europe

R. H. GRANT, vice-president of General Motors Corporation, who arrived Wednesday on the Homeric from Europe. Mr. Grant has been abroad for the past two months studying conditions in the export field.

To Visit European Shows

EXECUTIVES OF THE FRANKLIN AUTOMOBILE COMPANY, Syracuse, N. Y., who are planning to visit the automobile shows at London and Paris this fall, are shown above. Left to right: Lloyd B. Benham, export manager, who sails today on the Ile de France; L. J. Purdy, factory manager, and Ralph Murphy, vice-president and general manager, who will sail October 2, on the Aquitania. The men will return to the Franklin factory about the middle of November.

DELIVERIES OF PACKARD MODELS INCREASE 16.3% IN FIRST 20 DAYS OF SEPT.

Detroit, Sept. 26.—Current demand for the new Packard models introduced September 1 practically assures capacity operating schedules up through October, according to Alvan Macauley, president of Packard Motor Car Company.

"In the first twenty days of September, deliveries to customers were 16.3 per cent. ahead of deliveries in the same period of September last year, and our retail sales were 9.4 per cent. greater," he said. "During this period distributors have not had all types of cars and we have had to rely upon practically one type, the standard sedan. It will be late in October before distributors can be supplied with normal stocks of cars."

The new four-speed transmission, a feature of the 1930 models, can be installed in the 1929 models if desired, Mr. Macauley said, pointing out that new improvements wherever possible are so designed as to be adaptable to preceding lines.

H. B. M'MICHAEL IN NEW UNITED MOTORS POST

Detroit, Sept. 26.—Transfer of Hugh B. McMichael, manager of electrical sales for United Motors Service, Inc., to the Overseas Motor Service Corporation, broadening his field of activity to cover the organization and supervision of specialized service branches in all parts of the world, has just been announced. Mr. McMichael will leave shortly for Mexico City, where he will begin operations with the organization of a branch to handle the servicing of motor cars and motor car equipment throughout all Mexico.

H. B. McMichael

The Overseas Motor Service Corporation is a subsidiary of General Motors, performing similar service and sales functions in the export field to those carried on by United Motors Service in the United States and Canada. Mr. McMichael will organize and supervise service branches for the corporation throughout the world.

CANADIAN AUTOMOBILE EXPORTS FOR AUGUST DROP; TRUCKS IMPROVE

Montreal, Sept. 26.—Canada's exports of automobiles for August showed a decrease, as compared with the same month last year. Exports of commercial cars were a little ahead, but exports of passenger cars were nearly $1,000,000 less. The totals follow:—

COMMERCIAL CARS

August, 1929	2,728	$1,106,483
July, 1929	2,587	1,072,739
August, 1928	3,026	1,078,058

PASSENGER CARS

August, 1929	4,901	$2,220,316
July, 1929	4,732	2,188,786
August, 1928	7,985	3,138,845

Australia was the largest single buyer of commercial cars, taking $185,026 worth, while Spain was a close second, with purchases totaling $184,442. New Zealand was the

FRANKLIN DECLARES ITS QUARTERLY DIVIDENDS

Syracuse, N. Y., Sept. 26.—A common stock dividend of 50 cents a share was declared yesterday by directors of the Franklin Automobile Company, builders of the air-cooled Franklin cars. The quarterly dividend of $1.75 per share on the 7 per cent. preferred stock also was declared.

GAS TAX GAINS AT RAPID RATE

Annual Cost Per Car Up From 50 Cents to $13 Since 1921

NEW YORK, Sept. 26.—Gasoline taxes have increased from an average of only 50 cents per motor vehicle in 1921 to $13 per motor vehicle in 1928, and may reach an average of $17 in in 1929, the American Petroleum Institute finds in a survey of the gasoline tax situation, issued today.

The aggregate tax has increased from $4,700,000 in 1921, when 10,500,000 motor vehicles were registered, to $305,000,000 in 1928, when 24,500,000 vehicles were registered. Estimating the 1929 registration at 26,000,000 vehicles and the aggregate gasoline tax at $450,000,000, the institute points out that while scince 1921 motor vehicle registrations have not even tripled, the aggregate tax has increased a hundredfold.

The survey shows that every state now taxes gasoline. Rates range from two cents a gallon to six cents. with 30 states collecting four cents or more. Ten years ago, when the tax originated, the rate was only one cent, but increases have been numerous this year. Georgia and Florida within the past few months joined South Carolina in the six-cent bracket. The number of states having as low as two cents a gallon dropped to seven from thirteen. The number imposing a four cent tax increased to twenty from twelve. Seven states now have a five cent levy.

"A survey of editorial comment in

(Continued on Page 12)

HUDSON TO EXHIBIT AT PARIS AND LONDON SHOWS

Detroit, Sept. 26.—Hudson Motor Car Company will exhibit at the Paris Salon and the London Olympia Show, it is announced today. The company will display twenty-six regular body styles on which ninety optional color schemes are available at the standard price of the car.

S. G. Baits, chief engineer, and J. S. Draper, general export manager, will attend both shows. They will be joined in Paris by O. H. Williams, European director of Hudson-Essex activities.

Tendency on Part of States To Standardize Plate Color

WASHINGTON, Sept. 26.—Thirty-one states will change the color combination for automobile license plates in 1930, and sixteen different motifs will be used throughout the country, indicating that there is a tendency on the part of the states to standardize the color schemes, according to a survey by the American Automobile Association.

There were thirty-nine states to change color combinations in 1929 and a total of 23 different color motifs were used. Thirteen states and the District of Columbia will retain the 1929 color combinations, reversing them as to background and lettering. Only nine states and the District of Columbia retained the 1928 combinations last year. At the same time the changes are marked by a desire for darker combinations.

The A. A. A. survey reveals that first rank will be divided between three color combinations, with black on orange, white on black and yellow on black, each being adopted by six states. These color schemes will therefore predominate in 1930, dividing honors with yellow letters and numerals on a black background, which led last year.

Second honor will go to the white on red and black on gray combinations, which will each be used in five states. Beyond these more standard schemes will be found a variety of other hues represented in identifying the units in the nation's rubber-tired transportation system.

Following are the 1930 color combinations for passenger cars for all states, with the exception

(Continued on Page 12)

1929
XUM

Aviation Daily News

Commerce Dept. Lists 4,000 Emergency Landing Fields

WASHINGTON, Sept. 26.—There were 1,393 military, commercial and municipal landing fields and airports in the United States in June ,1929, according to information made available by the Department of Commerce.

There were 748 municipalities in which airports were proposed. The department stated that there are on record more than 4,000 other fields in the United States on which landings may be made, but many of which are constantly changing in character and cannot be permanently recorded.

Of the full total of fields and ports now in existence, 197 were intermediate fields along airways which are lighted and marked by the Department of Commerce. One hundred and forty-seven were marked or equipped with beacon lights or partial or full equipment of flood lights for landing.

California had 143 fields, which is the largest number of any single state. Texas came second, with 100, and Pennsylvania third, with 89. Ohio had 75 airports and fields when the survey was made.

The number of existing fields by states was as follows:—

Alabama 12, Arizona 37, Arkansas 15, California 143, Colorado 25, Connecticut 10, Delaware 6, District of Columbia 5, Florida 39, Georgia 21, Idaho 7, Illinois 69, Indiana 37, Iowa 41, Kansas 33, Kentucky 9, Louisiana 15, Maine 5, Maryland 16, Massachusetts 23, Michigan 38, Minnesota 19, Mississippi 7, Missouri 21, Montana 19, Nebraska 28, Nevada 18, New Hampshire 6, New Jersey 32, New Mexico 22, New York 49, North Carolina 25, North Dakota 8, South Dakota 16, Ohio 75, Oklahoma 49, Oregon 24, Pennsylvania 89, Rhode Island 8, South Carolina 15, Tennessee 11, Texas 100, Utah 9, Vermont 9, Virginia 32, Washington 29, West Virginia 10, Wisconsin 32 and Wyoming 26.

MONTREAL-VANCOUVER MAIL ROUTE PLANNED

Washington, Sept. 26.—Construction on the Western air mail route from Montreal to Vancouver is to start immediately and will be on a substantial operating basis within six months, according to a leading Canadian inspection official, states Consul Samuel C. Reat, Calgary, Alberta, in a report made public by the Department of Commerce.

It is estimated that sixty-three hours will be saved on the present train service between Montreal and Vancouver when this all-air mail service is effected. At the present time eastern and western Canada are joined by means of the United States transcontinental air-mail service. A direct Canadian route from Montreal connects at Detroit with the United States line.

AVIATION CORP. WILL CO-ORDINATE AIR LINES

New York, Sept. 26.—Graham B. Grosvenor, president of the Aviation Corporation, announced yesterday the creation of a transportation division to co-ordinate the activities of the various air line subsidiaries of the company. Thomas Hardin, formerly vice-president and general manager of Southern Air Transport, Inc., has been made director of operations.

The air lines that will come under Mr. Hardin's supervision, it was said, include the Universal Aviation Corporation, most of whose transport and air mail routes are in the Middle West and the Mississippi Valley; Colonial Airways, the Embry Riddle Aviation Corporation, Interstate Airlines and Southern Air Transport.

NEW STANDARD PILOTS EN ROUTE TO WEST COAST

Paterson, N. J., Sept. 26.—Clyde E. Pangborn and Carl A. Dixon of the New Standard Aircraft Corporation, this city, holders of the endurance record for open cockpit ships, 179 hours 41 minutes, by virtue of their recent flight in a New Standard at Syracuse, N. Y., are now en route to the West Coast. The purpose of the trip is to demonstrate New Standards in the West.

Two New Words Coined for Aviation

New York, N. Y., Sept. 26.—Two new words are to be added to the American language by the aviation industry.

They are "enplane" and "deplane," having the same relative significance as "entrain" and "detrain" or "embarked" and "debarked."

Following a note of approval from Frank H. Vizetelly, chief lexicographer of Funk & Wagnalls, dictionary publishers, Graham B. Grosvenor, president of the Aviation Corporation, which, among other activities, operates the nation's largest air transport system, announced the words would be used in all literature of the corporation.

Mr. Vizetelly's letter said: "Allow me to offer you my congratulations upon the coinage of the terms you submit—'enplane' and 'deplane,' terms the coinage of which is justified by necessity. Would that every other term in aeronautics had been coined with an eye toward practical application."

Sumner Sewall Will Survey Airplanes Abroad

New York, Sept. 26.—Sumner Sewall, general traffic manager of Colonial Airways System, will sail Friday on the Homeric for a five weeks' stay in Europe. Mr. Sewall plans to make a survey of the leading passenger air lines abroad, including the London-Paris line and the routes operated by Lufthansa in Germany, as well as studying mail transport.

During Mr. Sewall's absence, Goodrich M. Murphy, formerly district manager at Buffalo, will act as general traffic manager in New York, while John D. Davis, manager of the Colonial office at Rochester, has been shifted to Buffalo in Mr. Murphy's place.

Other changes in personnel, effective October 1, include the transfer of Charles Stearns, district manager of Canadian Colonial Airways at Montreal, to New York, to take charge of Colonial-Western Union messenger service. Stearn's place will be taken by Ralph S. Maugham, now district manager at Albany, while Samuel Duncan, district manager at Rochester, will be placed in charge at Albany.

AIRPLANE PROVES AID IN AUTOMOBILE SALES

Chehalis, Wash., Sept. 26.—An airplane was recently used to further an automobile sale for the Harry B. Quick Auto Company of Chehalis. A customer visited the storeroom and selected the car he wanted, which Quick did not happen to have in stock that day. The man said he wanted the car that afternoon.

Quick and his daughter, Annabelle, and Pilot Roy Hubert left at once in Quick's plane for the warehouse in Seattle. Quick picked out the car his customer wanted, and Miss Quick drove it to Chehalis and delivered it to the customer.

UNIVERSAL STOCKHOLDERS ARE GIVEN AN EXTENSION

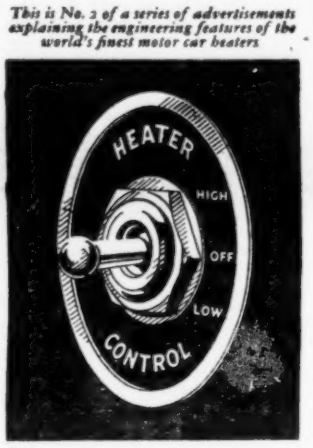
New York, Sept. 26.—Stockholders of Universal Aviation Corporation have until October 31 to exchange their shares into stock of the Aviation Corporation on a share for share basis, under an extension announced by Graham B. Grosvenor, president of Aviation Corporation. The Aviation Corporation now owns in excess of 97 per cent of the stock of Universal Aviation Corporation.

U. S.-MEXICO DAILY MAIL SERVICE IS AUTHORIZED

Washington, Sept. 26.—The Post Office Department has authorized daily air mail service on F. A.-M. Route 8, from Brownsville, Tex., in place of the thrice a week service which was formerly in operation, thus affording a speedy air mail service daily for Mexico.

Miami, Fla., Sept. 26 (U. T. P. S.).—Work is to start immediately on showrooms for display of Cadillac cars at Lincoln Road and Pennsylvania Avenue, Miami Beach. The building will be the property of the George H. Earle estate of Philadelphia and will cost $62,000. In size it will be 60 by 150 feet, one story high, with a front of plate glass and carved stone.

This is No. 2 of a series of advertisements explaining the engineering features of the world's finest motor car heaters



Volume of Heat Controlled from Instrument Board

A three-way electric switch, conveniently located on instrument board, controls the speed of the electric blower and thus regulates the *amount* of heat circulated throughout the interior of the car.

Metalcraft Heaters are specially designed for the following cars and are available through their authorized dealers:

AUBURN	GRAHAM-PAIGE
BUICK	LA SALLE
CADILLAC	MARMON
CHRYSLER	OLDSMOBILE
DE SOTO	PACKARD
DODGE	PLYMOUTH
FRANKLIN	REO

METALCRAFT HEATERS

WORLD'S FINEST MOTOR CAR

Metalcraft Heater Corporation
Grand Rapids, Michigan

Canadian Metalcraft Corp., Ltd.
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Subsidiaries of Grand Rapids Metalcraft Corporation

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SALESMEN WANTED

To handle three lines fast moving automotive products on 25% commission basis.

BOX 236,
AUTOMOTIVE DAILY NEWS,
GRAYBAR BLDG., N. Y. CITY

AUTOMOBILE EXECUTIVE

Desires connection. Thoroughly conversant with all branches of the retail automobile business. Can manage, organize and supervise. Can furnish best of references as to honesty, integrity and ability.

BOX 235,
AUTOMOTIVE DAILY NEWS,
GRAYBAR BUILDING,
NEW YORK CITY

SPARKS from DETROIT

River Rouge Visitors

* * *

Honors for Edison

* * *

Prosperous Michigan

Fred Kingsbury—Detroit Editor

THE Ford people have been greatly interested in the number of visitors at the River Rouge plant this year and recently completed tabulations which show that 500,000 inspect the huge property every year. These visitors come from all over the earth and checks made by guides show that the number of visitors all summer has been between 1,300 and 1,600 a day. The largest number ever to visit the Rouge plant of the Ford Motor Company in a single day was 8,000.

The Rouge plant covers 1,100 acres and it requires from an hour and a half to two hours, to visit some of the more important places of interest. Guides at the plant say that about 75 per cent. of the visitors during the summer months had been from the West.

* * *

DETROIT is making elaborate plans to observe "Light's Golden Jubilee," the fiftieth anniversary of the perfection of the electric light bulb by Thomas A. Edison. A committee, headed by Philip Breitmeyer, has been named and plans are under way for the big observance October 21, closing day of the week's program, with Edison himself present at a dinner to be given to about 1,500 guests at Dearborn by Mrs. Henry Ford and Mrs. Edsel Ford.

A large electric fountain is being built in West Grand Circus Park in honor of Edison.

Detroiters are very fond of Edison and plan to give him high honors during his visit in this city, when President Herbert Hoover also will be present.

* * *

We are about to elect a mayor in this city. As is usual in nearly every city in the country when election is approaching, the various candidates are telling what a great amount of work they will do to improve the city when they are elected.

* * *

FELIX FARRELL, economist of the First National Bank of Detroit, writing in the current issue of Michigan Graphic, published by that institution, says that during the first eight months Michigan business has shown a greater proportionate rate of increase than the United States as a whole, according to several fundamental indexes of commercial and industrial activity.

The article continues in part: "The total clearings of seven Michigan cities for the month of August, 1929, was $1,056,600,000, according to Federal Reserve member banks in those cities. This was an increase of 10.3 per cent. over the August, 1928, total of $957,300,000. For the eight months ended August 31, 1929, the aggregate for the state was $8,465,800,000, or 17.6 per cent. higher than the figure of $7,198,400,000 for the corresponding period in 1928."

This would seem to indicate that Michigan is in a highly prosperous condition and is making great gains.

* * *

ALL operators of automobiles in Michigan must have drivers' licenses which they must procure at police headquarters.

William Black, head of the investigation bureau in Detroit, has had a traffic light erected at police headquarters and is testing the eyes of all applicants for licenses to ascertain if they are color blind.

It is not generally known, but a school also is maintained for applicants and they must pass a rather rigid examination before they can obtain licenses.

The installation of the traffic signal is something new in this city and the alertness with which applicants call the lights and their purposes depends a great deal on whether they get a license or return to the school.

In some cities the amber caution light has been discarded, but in Detroit it continues to be used generally. In the city there are no overhead traffic lights, although these are common in some municipalities in the county. The city has concentrated on lights which are erected on standards or poles and which can easily be seen without craning necks under a sun visor on a car, as is sometimes necessary when traffic lights suspended in the center of a street intersection are used.

Financial News of the Automotive Industry

Range of Automotive Stocks

NEW YORK STOCK EXCHANGE

WEDNESDAY, SEPTEMBER 25

Previous 1929 High	Previous 1929 Low	Div.		Sales	High	Low	Close	Net Change
104⅞	15	....	Advance Rumely ...	1,600	18¾	13¾	18¼	+ 2¼
119	33	....	do pf.	400	35	33⅞	35	+ 2
218⅞	95⅛	3	Air Reduction	1,800	206⅜	201⅜	203⅛	— 8¾
11¼	2⅜	....	Ajax Rubber	2,100	3¾	3½	3½	— ¼
330	166	7	Allis Chalmers	400	289½	287	289½	— 1½
76½	40½	....	Am. Bosch Magneto.	5,600	70⅞	66⅝	70⅜	— ⅜
89⅜	70¼	7	Amer. Chain pf.	200	89¼	89	89	— ½
8¾	4¼	....	Am.-La France	700	4½	4¼	4¼	— ⅜
514	221	4	Auburn	900	460	450	460	+ 5
104⅜	75⅛	2	Bendix Aviation ...	26,200	75¼	70⅛	75¼	— ¼
136⅝	110¼	3	Bohn Aluminum	1,900	114¼	113¼	113¾	— 1¼
143⅜	70¼	4	Borg-Warner	4,900	71	68	69	— 2
63⅛	27⅝	....	Briggs Mfg. Co.	18,500	28	25	27	— ⅝
43½	35⅛	2	Briggs & Stratton ..	700	38⅛	38⅛	38⅛	+ ⅛
73⅞	36	3	Brockway Motor ...	1,100	36¼	35½	35½	— 1⅜
54⅞	42	1.60	Bullard	300	47	45	45	— 2
47½	28¼	....	Chicago Pneu. Tool.	1,400	43⅜	42⅛	43⅜	— ⅛
36	26	3	Chicago Yellow Cab.	160	31	29¾	29¾	— ¼
135	61½	3	Chrysler Corp.	35,200	62⅝	61½	62⅛	+ ⅛
62⅝	43	2	Commercial Credit..	14,300	49¾	47	49	....
105⅞	92⅞	6.50	do pf.		No sales today			
212½	131½	4	Comm'l Invest. Trust	9,400	208½	197	202½	— ½
99	91	6.50	do pf.		No sales today			
28⅜	13	.80	Continental Motors .	9,500	13¼	12¾	12¾	— ⅜
119⅞	58⅛	3.50	Cutler-Hammer	700	114¼	113½	114¼	— 1
231	155¾	4	Du Pont	14,500	201	193	200	+ ⅝
76⅜	56	3	Eaton Axle & Spring	400	59	59	59	+ 1⅜
174	126⅜	6	Electric Auto-Lite .	6,100	147½	142¼	145¾	— 1½
92⅞	77	5	Electric Stor. Battery	3,400	90¼	87⅛	88⅝	— 1½
73¾	42	2.50	Evans Auto Load ..	500	46	46	46	— 3½
22½	5	....	Emerson Brant A...	100	7⅜	7⅜	7⅜	— ⅝
22⅜	13⅛	.80	Federal Motors	1,500	13¼	13	13	— ¼
20⅛	6¼	....	Fisk Rubber	3,600	7½	7⅛	7¼	— ⅛
71½	35⅝	....	do 1st pf.		No sales today			
33⅞	14	....	Gabriel Snubber ...	1,000	19	18	18	— 1⅜
403	219	4	General Electric	15,600	362	353½	359⅞	+ 1⅝
25	8	....	Gardner Motor	1,000	8⅞	8¼	8¼	— ⅜
91⅞	66¼	3	General Motors	136,300	70⅝	69⅛	69⅞	— ⅛
126½	122½	8	do 7s pf.	200	124½	124½	124½	....
64⅛	36⅞	2	Glidden Co.	4,500	56½	55	56½	+ 1
146⅛	101⅛	7	do pf.		No sales today			
105⅝	70⅜	4	Goodrich	5,200	71⅝	70	71⅛	+ ¼
115⅛	111	7	do pf.		No sales today			
154½	103	5	Goodyear T. & R. ..	8,400	106¾	103⅝	105½	+ ½
104⅞	100	7	do pf.		No sales today			
54	18	....	Graham-Paige Motor	5,300	18⅞	18⅛	18½	....
68⅝	21	8	Hayes Body	8,900	28⅜	25⅝	27	+ ¼
52⅜	37½	1.50	Houdaille-Hershey B	7,700	46	44	44¼	+ ⅛
93½	75⅛	5	Hudson Motor Car..	6,000	79¾	78¼	79¼	+ 1
82	38½	2	Hupp Motor Car ...	10,000	42¾	41½	42	+ ½
32½	9⅞	....	Indian Motocycle ..	500	8	8	8	— 1⅛
14¼	8⅛	....	Intercon. Rubber ...	600	9	9	9	....
142	92	2.50	Interna. Harvester .	9,200	122⅞	119⅝	122⅝	— ¼
145	137	7	do pf.	300	139⅝	139⅜	139⅜	— ¼
242¾	152½	3	Johns-Manville	12,400	207	193	203	— 3
16½	5½	....	Jordan Motor Car ..	1,100	5¼	4¼	4⅝	— ⅜
24	7¾	....	Kelly-Springfield ...	1,800	8⅝	8¼	8½	....
100	85	....	do 6s pf.		No sales today			
94⅞	50½	....	do 8s pf.	50	57	57	57	....
59⅜	40	2	Kelsey-Hayes Wheel	2,500	40	37½	38½	— 1⅝
25	10	....	Lee Rubber & Tire..	900	11	10¾	10¾	— 1¼
61	48	2.60	Link Belt		No sales today			
114⅜	91	6	Mack Trucks	4,200	98¾	96½	98	....
89⅞	69⅛	2	Marlin Rockwell ...	200	78½	76⅞	77⅞	— 1¼
104	66	4	Marmon	3,400	66¼	65¾	65¾	— ¼
18	7⅛	....	Martin Parry		No sales today			
34⅞	20	....	Mengel	1,200	23⅞	23⅝	23⅝	— ⅝
28⅞	11½	....	Miller Rubber	100	11⅞	11¾	11⅞	— ⅛
8	2½	....	Moon Motors	100	3⅛	3⅛	3⅛	+ ⅛
31⅞	18⅛	....	Moto Meter G & E..	1,300	18¼	17½	18	— 1¼
142	96½	7	Motor Products	300	109	105	105	— 7
55⅛	38⅝	2	Motor Wheel Corp. .	1,600	41½	40¼	40⅛	— ¾
81¾	34⅛	....	Mullins Mfg.	1,100	34⅞	34	34	— ⅞
100⅞	60	3	Murray Corp	5,200	60¾	60	60¾	+ ⅛
118⅞	79⅛	6	Nash Motors	14,700	79⅞	77⅜	79¼	....
6¼	1¾	....	Norwalk T. & R.		No sales today			
45	19	....	do pf.		No sales today			
10⅞	6¼	....	Omnibus Corp.	1,100	6¾	6⅛	6¼	....
52¼	37	2.50	Otis Steel	4,100	46½	44½	45¼	— ⅝
32½	26⅜	....	Packard Motor Car.	41,200	28½	27½	28	— ⅛
22½	9¼	....	Peerless Motor Car.	1,500	9	8⅞	9	— ¼
37⅞	27½	....	Pierce-Arrow	1,300	31½	31¼	31½	+ ¼
31¼	27½	....	do pf.		No sales today			
31⅞	19⅞	....	Reo Motors	1,200	19¾	19½	19½	— ⅜
12¼	6	....	Reynolds Spring ...	1,800	10¾	9⅝	10¾	+ ⅛
66⅜	45	....	Spicer Mfg. Co.	200	55⅞	55⅞	55⅞	— ⅝
55⅞	45	3	do pf.	400	48⅛	48	48	....
77	60¼	3.50	Stewart-Warner Spd.	4,900	62½	60½	61⅞	+ 1¼
98	68½	5	Studebaker Co.	3,900	69¼	67¾	67¾	— ¾
126	123	7	do pf.		No sales today			
34⅜	22⅝	.60	Timken Detroit Axle	6,800	33⅜	30¼	31⅞	+ ⅜
119½	73½	3	Timken Roller Bear.	11,200	114½	108½	112¼	+ ¼
63	38¾	2.50	Trico	1,800	48⅝	47	48⅝	+ 1⅝
65	43	....	U. S. Rubber	10,100	54½	51¼	54⅜	+ ⅜
92½	69½	....	do 1st pf.	500	77	75½	75½	— 1½
42⅞	28¼	2	Warner Quinlan	3,100	28⅞	28⅜	28⅜	— ½
67⅜	43¼	2	Westinghouse A. B. .	9,100	62⅝	59¾	61⅝	— ¼
53½	38	1	White Motors	3,700	46¼	45	45	— 1½
61¼	37	2.50	Wilcox Rich A	900	44⅜	44¼	44¼	— 3
62	34	2	do B	2,800	42¼	40⅝	41½	— 1¾
35	17½	1.20	Willys-Overland ...	12,400	18⅞	17½	18¾	— ¾
103	92	7	do pf.	500	95	94¾	94¾	— ⅜
88	61¾	4	Yale & Towne.....	100	83¼	83¼	83¼	— ¾
51¼	30	....	Yellow Tr. & C.	6,800	31⅞	30	30¾	+ ⅜
96½	80	....	do pf.		No sales today			

NEW YORK CURB EXCHANGE

Sales		High	Low	Close	Net Chge
900	Budd Ed	21¼	21	21⅛	— ½
500	Caterpillar T..	79¾	79¾	79¾	— ¾
	Checker Cab...	No sales today			
113200	Cities Service..	59½	58¾	59⅜	+ ⅛
400	do pf	94⅝	94½	94⅝	...
	Con Di Fibre..	No sales today			
3500	Cord Corp.....	33¼	30¾	33	...
1500	Doehler D C...	35¾	35	35	— ⅝
1800	Durant Motor..	8¾	8	8⅜	+ ¼
100	Fageol Motor..	4½	4½	4½	— ½
	Fedders	No sales today			
	Federal Mogul.	No sales today			
1100	Fed Screw	69½	68⅜	68⅝	—2¼
3100	Fiat	22¾	22⅝	22¾	...
150	Firestone	205½	202½	205	—4¾
	do pf	No sales today			
1200	Ford Canada..	40¾	39⅝	40¼	— ¾
5100	Ford Ltd	17½	17	17½	...
500	Franklin Mfg...	36	36	36	...
	Gen T & Rub..	No sales today			
	Gr'nf'ld T & D	No sales today			
	Hall Lamp	No sales today			
	Henney	No sales today			
	Hood Rubber ..	No sales today			
	India Tire	No sales today			
	Isotta Fras	No sales today			
	Jaeger	No sales today			
100	Lakey	19⅝	19⅝	19¾	— ⅜
	McQuay Norris	No sales today			
100	Midland	110	110	110	—2
	Nat Rub Mach.	No sales today			
400	Paramount Cab	21⅜	20	21⅜	— ⅜
100	Perfect Circle..	55½	55½	55½	—1½
	Pines Winter..	No sales today			
100	Pitt Pl Glass..	67	67	67	—1⅞
	Raybestos	No sales today			
	Rolls Royce Am	No sales today			
	Ross Gear	No sales today			
	Safe T Stat...	No sales today			
	Seiberling	No sales today			
	Sparks With...	No sales today			
300	Stutz Motor...	12⅛	12⅛	12⅛	— ⅛
600	Thermoid Co..	32¾	32	32¾	...
400	Thomp Prod...	51	48⅜	48⅜	—2⅛
100	Triplex	11⅜	11⅜	11⅜	+ ⅛
	Tung Sol	No sales today			
	U S Asbestos...	No sales today			
600	Watson, J W..	3¼	3¼	3¼	...
100	Wayne Pump..	21⅛	21⅛	21⅛	—1⅛
	West Auto	No sales today			
	Yel Taxi N Y.	No sales today			

NEW YORK OVER-THE-COUNTER

Div.		Bid	Asked
6	Am. Hard Rubber.....	70	75
8	Dixon (J.) Crucible.....	180	190
2 50	Doehler D. C.....	40	45
7	do pf	110	120
....	Eiseman Magn.	30	35
7	do pf.	95	100
....	Rolls-Royce Am.	17	21
....	do pf.	60	65
1.20	Smith (A. O.).....	255	265
....	Splitdorf Beth. E.....	6	7

CHICAGO STOCK EXCHANGE

Sales		High	Low	Last
650	Acme Stl.....	128	126½	127
150	Ainsworth	46	45	45½
950	Allied Prod	63	59⅛	61½
200	Auburn Auto.....	455	450	450
11450	Bendix Avia	76	70½	74½
20950	Borg-Warner	71½	68	70¼
50	Chain Belt	50½	50½	50½
300	Chi Yellow Cab.....	29	29	29
11150	Cord Corp	34½	31⅛	34½
1660	Houdl Hsh A.....	46	44	45
1550	do B	45½	44⅛	45
100	La Salle Ext	3⅛	3⅛	3⅛
350	Modine	67	65	66
300	Muncie Gar A.....	12	12	12
200	Muskegon M S.....	25	24	25
200	Nchm Spg	60	60	60
50	Nat Battery	45	45	45
350	Pines Winterfit	78	76⅞	76⅞
150	Ross Gear	47¾	47½	47¾
700	Van Sickl	30½	30	30½
150	Warchell	25	25	25
50	do pf	31¾	31¾	31¾
251	Wksh Motor	190	189	189
100	Wayne Pump	22¼	22¼	22¼
50	do pf	36¾	36¾	36¾

CLEVELAND STOCK EXCHANGE

Sales		High	Low	Last
50	Apex Elec pf	96	95	95
38	C Alloy pf.....	111½	111½	111½
25	Falls Rub	4½	4½	4½
909	Faulti Rub	43	41½	41½
10	Firestone 7 pf.....	107½	107½	107½
60	Gen Tire	255	250	250
40	India Tire	35	35	35
128	Jaeger	32⅛	32	32
55	Jordan M pf	33	33	33
50	Mohawk Rub	25	24½	24½
30	Packard El	32¾	32¾	32¾
30	Seiberling Rub	28	28	28

DETROIT STOCK EXCHANGE

Sales		High	Low	Last
491	Ford A	41	40½	40½
200	Fed Motor	13	13	13
1210	Hall Lamp	22¼	22	22
2125	Packard	28¼	23	28⅛

Rubber Prices

RUBBER EXCHANGE OF NEW YORK

	High.	Low.	Closing Sept. 25.	Closing Sept. 24.
September	19.30	19.30	....	19.60
October	19.80	19.80	†19.80	19.90
November	....	....	*20.00	20.40
December	20.70	20.60	†20.60	20.90
January	20.90	20.80	20.80@20.90	21.00
February	....	....	*21.00	21.20
March	21.40	21.20	†21.20	21.50
April	....	....	*21.40	21.70
May	21.80	21.70	21.60@21.70	21.90
June	....	....	*21.80	22.10
July	....	....	22.00@22.20	22.30
August	....	....	*22.20	22.40
Spot	....	....	*19.80	19.60
Sales, tons	....	....	1,102½	875

Transferable notices, 8, so far, 572.

*Nominal. †Trading.

OUTSIDE CLOSING PRICES

(Per pound, delivered, New York.)

	Bid.	Asked.
PLANTATION—		
Ribbed Smoked Sheets—		
Spot	20	20¼
September	20	20¼
October	20⅛	20⅜
October-December	20⅜	20⅞
January-March	21	21⅛
April-June	21½	21⅞
*Spot—		
Crust latex	21	21⅜
Thin pale latex	21¼	21½
Clean thin brown crepe ...	17	17⅛
*Specky crepe	16¾	17
Rolled brown crepe	12½	12⅝
No. 2 amber	17½	17⅝
No. 3 amber	17¼	17½
No. 4 amber	17¼	17½
*PARAS—		
Up-river, fine, spot	20¾	21
do, coarse	11	11½
Accra, fine, spot	21	21¼
Caucho, Ball—Upper	11	11⅛
CENTRALS—		
*Esmeraldas	11½	12
*Central scrap	11½	12
Guayule, washed, dried	..	19
BALATA—		
*Block Ciudad	54	..
*Surinam sheet	56	..
*Manaos block	55	..
Peruvian block	21	22

SCRAP RUBBER

(Dealers' buying prices, f. o. b., N. Y.)

Boots & shoes, black, ton	$18.00	@20.00
Arctics, cwt	.50	@ .60
Inner tubes, mixed, cwt	4.00	@ 4.12½
Inner tubes, red, cwt	4.37½	@ 4.50
Tires, stand'rd, mixed, ton	18.00	@19.00
Inner tubes, No. 1, cwt	7.12½	@ 7.37½
Inner tubes, No. 2, cwt	3.75	@ 3.87½
Mixed hose, soft, cwt	.50	@ .55
Hose, air brake, ton	18.00	@20.00

*Nominal. †Sold on sample only.

Waterloo, Ia., Sept. 26.—W. E. and T. F. Billeter of Ottumwa have purchased the Marshall Chevrolet Company from W. Fiske Marshall and will operate the business as the Billeter Chevrolet Company. The brothers will continue their sales and service company in Ottumwa.

The A. D. N. Analyst Looks Them Over

THE R. M. HOLLINGSHEAD COMPANY

ENTERING the year 1928 with a large deficit from operations in 1927, the R. M. Hollinsghead Company made notable headway in 1928, finishing the year with a net loss of only $22,000, as compared with a deficit of $185,000 in the preceding year.

Considering that in 1928 the company completely revamped its method of distributing its products, the record for that year was notable. It had been the practice of the Hollingshead company to merchandise its long list of products directly through retailers. This necessitated branches and warehouses in all sections of the country. This system was discontinued last year and now the company's goods are being sold through jobbers. This meant a big readjustment program for the company, including disposal of the various branches and warehouses.

The Hollingshead company has a long and impressive record behind it, and it is believed by those familiar with the concern that as quickly as the recovery from the slump of the past three years is completed the company will resume the high level of earnings that has been the rule rather than the exception. The management of the company is sound and its financial policy is conservative. It is controlled by the R. M. Hollingshead Corporation, which in turn is in the hands of executives and employees. Because of this situation, the company has been able to conserve its assets by adjusting dividend payments to actual earnings.

The R. M. Hollingshead Company was incorporated away back in 1897 under the laws of New Jersey, to acquire a business of the same name which had been established in 1890. In 1925 the R. M. Hollingshead Corporation was formed and this new holding corporation took over all of the capital stock except the 8 per cent. preferred shares. The holding concern also acquired all of the stock of the Frank Miller Company.

The R. M. Hollingshead Company was then recapitalized, with the following authorization of stock: 20,000 shares of $7 preferred, of which 12,000 shares were sold and 1,482 shares were exchanged for the 8 per cent. stock of the old company; 300,000 shares of common stock, divided into 275,000 Class A non-voting shares and 25,000 Class B voting shares. Of this authorized stock, there are now outstanding 13,482 shares of the $7 no par preferred stock, 275,000 shares of the Class A and 25,000 shares of the Class B. Of the Class A stock, 263,000 shares are owned by the R. M. Hollingshead Corporation, while all of the Class B stock is held by the corporation. No dividends are now being paid on any of the stock. There is a funded debt consisting of a $760,000 first mortgage.

Subsidiary and affiliated companies are the Corporate Investment Company of Camden, N. J.; the Frank Miller Company of Camden, the R. M. Hollingshead Company of Canada, Ltd., of Bowmanville, Ont., and the R. M. Hollingshead Corporation. The company has large real estate and factory holdings in Camden and has a plant in Bowmanville, Ont.

Products of the company include ninety-eight chemical items, most of which are marketed under the trade name "Whiz." They include articles for automobile and household use, such as soaps and automobile body polishes, greases, chemicals for stopping leaks in radiators, etc., metal polishes, leather dressings, etc. The main plant is at Camden, and in addition to the Canadian branch, the company has a branch in Havana, Cuba. The company invested $300,000 in the Canadian plant in 1927.

The change in the merchandising system of the company is understood to have been well received by the trade and, while net sales may this year show some decline, reduced sales expense and other items are expected to greatly improve the earnings position of the company.

The net sales have been above the $5,000,000 mark in each of the past five years, having been in the $4,000,000 range in 1923, after resting only one year in the $3,000,000 range. The sales were above $2,000,000 in the years 1919 to 1921, inclusive.

Profits reached the highest point of the past ten years in 1924, when they were $480,000, as compared with $430,000 in the year preceding and $248,000 in the year following. This decline in 1925 was the beginning of the downward curve in the earnings, and in 1926 the net profit amounted to only $57,000. Then came the $185,000 deficit of 1927 and the partial recovery of 1928, when the deficit was reduced to $22,000.

Officers of the company were recently reported as R. M. Hollingshead, president; R. M. Bagley, vice-president; A. T. Reed, secretary; C. M. Tomlinson, treasurer. Directors are Mr. Hollinshead, Mr. Bagley, Mr. Tomlinson and R. M. Hollinshead, Jr.

The company fiscal year conforms to the calendar and the annual meeting is held on the third Monday in January. Executive offices are at Camden.

The financial condition of the company is strong, the balance sheet as of December 31, 1928, showing total current assets of $2,546,255, as compared with total current liabilities of $1,479,437, with total assets amounting to $5,435,465.

Following is a balance sheet of the company as of December 31, 1928, as compared with December 31, 1927:—

ASSETS	1928	1927
Land, buildings, equipment, etc. (less depreciation)	$2,021,015	$1,907,899
Real estate (not used in business)	310,347	.....
Good will, trade mark and formulas	50,001	1
Stock and accounts of affiliated companies	139,525	434,099
Stock and accounts of subsidiary companies	.....	162,061
Deferred charges	249,678	220,990
Other assets	118,644	60,869
Current Assets—		
Cash	224,178	229,405
Accounts receivable	1,209,334	1,189,208
Cash surrender value insurance	17,611	56,419
Inventories	1,095,132	835,695
Total current assets	$2,546,255	$2,310,727
Total assets	$5,435,465	$5,096,646
LIABILITIES		
Capital stock	$2,885,250	$2,385,250
Minority interest in subsidiaries	39	.....
Funded debt	760,000	820,000
Real estate mortgage	39,863	.....
Profit and loss surplus	270,876	302,100
Current Liabilities—		
Notes payable	1,049,208	942,495
Accounts payable	327,052	73,272
Loan payable	12,000	.....
Accruals	49,756	43,529
Current accounts with affiliated companies	11,421	.....
Funded debt installment	30,000	30,000
Total current liabilities	$1,479,437	$1,089,296
Total liabilities	$5,435,465	$5,096,646

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Fuel Production and Demand

AT first glance it might seem that the only interest which consumers of petroleum fuels may have in the production and marketing of these products is to get them at the lowest possible cost. If this were so the consumer would be benefited by overproduction, because that inevitably pulls down the price of petroleum products to the ultimate user.

As a matter of fact the consumer is actually benefited by lower prices for fuel and lubricants when such a condition comes with proper conservation of our petroleum resources. We have no reason for hoping that the supply of petroleum beneath the surface of the earth is inexhaustible. We have already used almost unbelievable quantities of the mineral, if that be its generic classification. Scientists agree that the supply at present in sight is not sufficient for more than twenty-five years at our present consumption. And yet our rate of consumption increases year by year. In short every indication bids us use all due economy in drawing what we need for our yearly fuel consuming operations from the bowels of the earth, because once above ground the shrinkage is tremendously accelerated.

The fact is that the interests of both marketers and consumers will best be served by the oil industry's arranging to draw from underground storage, in vats of nature's devising, just the quantity of crude oil needed for any given year's operations. Obviously this does not mean the creation by the oil industry of an artificial shortage which will permit it to boost prices.

During the first half of 1929 the total consumption of gasoline increased in this country and in exports by 26,000,000 barrels, over the same period of 1928. But during this same six months' period the total supply of gas increased by 33,000,000 barrels. In other words the refiners were overoptimistic as regards the increase in consumption this year by some 7,000,000 barrels. This quantity of refined motor fuel had to be put into our reserve. The oil industry is trying by voluntary restriction of output to bring about a parity between production and demand. It is trying to increase the production of crude oil and the refining of motor fuel, lubricants, etc., just enough to take care of the natural increase in demand but not enough to swell still further our reserves above ground.

It is to be hoped that this parity between production and consumption can be achieved, but always with a watchful eye on any attempt to create an artificial shortage, which will raise the price of fuel without particularly serving the interests of conservation.

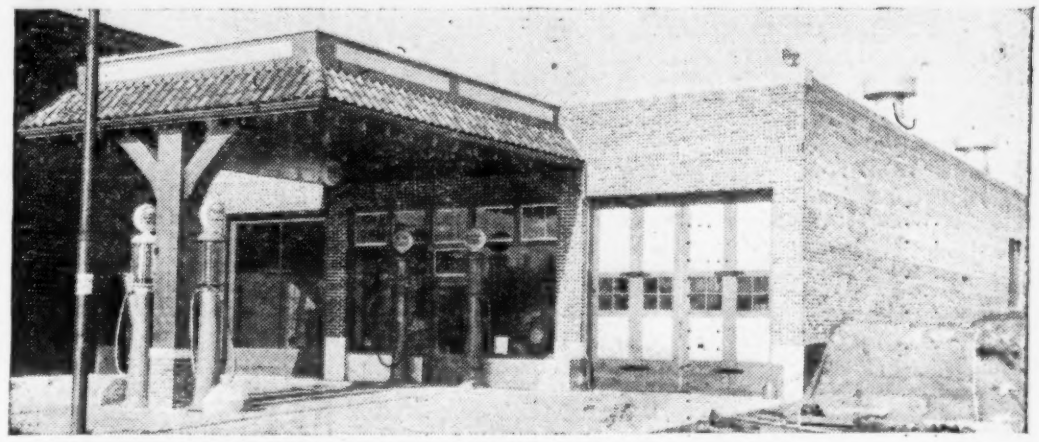
Another Link

NEW YORK city and the city of Mexico have moved nearer to each other. Until now it has been a matter of some five days to get from the metropolis of this country to that of our southern sister republic. Today the two cities are just forty-nine hours apart. Of course it is the airplane that has drawn them closer together.

Five transportation companies have united to form this new two-day service between New York and Mexico City. They are the Universal Airlines, New York Central Railroad, Southern Air Transport, Missouri-Kansas-Texas Railway and the Mexican Aviation Corporation. Sleeping by night in the lower berth of a Pullman, the traveler takes to the air during the day and after changing in Chicago and again at the border the voyager is in the capital of Mexico in just a shade over two days. And the fare from New York to Mexico is just $301.05.

These be parlous days in the German automobile industry. Manufacturers are buttoning up their cash boxes at reports of a $450 car soon to appear on the market and the negotiating for a plant by the Ford organization. When the $450 jobs and the model A's begin to roll off the production lines, the Hindenburg line will be pretty completely smashed.

Duluth Opens Newest One-Stop Station



THE GRAND OPENING of Duluth's newest one-stop service station, operated by the Tire and Battery Service Company at 2215 West Superior St., was held recently. The new station, shown in the above picture, was constructed at a cost of $20,000. Tires, inner tubes, batteries, accessories, gasoline, oil and a complete one-stop service are featured at the new station. Clarence Erickson of Duluth is owner of the new establishment.

ALLIANCE, O., WILL HAVE TWO NEW BUILDINGS

Alliance, O., Sept. 26.—Two new buildings to be used in the automotive accessories business here are rapidly nearing completion. A two-story brick building, being erected at a cost of $25,000 will house the Firestone Tire and Service, Inc., of which W. D. Coss is manager. This will offer a complete tire and accessory service. A two-story brick building is being erected by Alex Cabassa, head of the Alliance Yellow Cab, Inc., for the Alliance Brake Service. Both buildings will be ready for occupancy in the next few weeks.

BISCAYNE MOTOR TAKES WILLYS-OVERLAND LINES

Miami, Fla., Sept. 26 (U. T. P. S.).—The Biscayne Motor Corporation has been appointed distributor for Willys-Knight and Whippet automobiles for southeastern Florida, the territory extending from Daytona Beach on the north down to Miami.

C. C. Crawford, zone manager for the Willys-Overland, Inc., is in Miami completing arrangements for the new territory. The Biscayne Motor Corporation, according to Leo Edwards, general manager, plans to appoint some twenty-five dealers and representatives in the larger towns and cities of the East Coast territory.

FORD SHOWS COMPLETE LINE AT BOSTON SALON

Boston, Mass., Sept. 26.—The Ford Motor Company is showing all its twelve models together in one show at the Ford salon this week in Horticultural Hall.

Three of the models have only been out six months—the town sedan, sport cabriolet and the de luxe delivery—which are regarded as the last word in smartness. In addition, there are a half dozen trucks, two chassis and a complete exhibit of all parts.

TAROLA MOTOR COMPANY ADDS WHIPPET LINE

Portland, Ore., Sept. 26.—Through a contract just negotiated, Joseph P. Tarola, operating individually under the firm name of the Tarola Motor Car Company in his own building at 11th and Burnside Streets, has become one of the major distributors of automobiles in the Pacific Northwest. The contract involves approximately $2,000,00 0worth of cars to be shipped during this contract year, it is announced.

Tarola now becomes Oregon and southern Washington distributor for both the Willys-Knight and Whippet lines. While Tarola has been acting as Knight distributor for several months, his territory has been increased and the Whippet line of fours and sixes has been added.

TIRE MERGER IN MEMPHIS

Memphis, Tenn., Sept. 26.—A merger in the tire trade here, just announced, involves about $200,000. F. W. Pennybaker, president of the Shelby Tire Company heads the organization to be known as the Shelby-Roth Company, the Shelby Tire Company and the H. H. Roth Company merging. Roth will be vice-president and sales manager.

Miami, Fla., Sept. 26 (U. T. P. S.).—The William A. Estaver Company, Hupmobile distributors for Miami, announce the appointment of Charles A. Smith as service supervisor.

Retail Battery Sales in N. Y. and Pennsylvania Show Marked Increase

JAMESTOWN, N. Y., Sept. 26.—The retail battery business in southwestern New York and northwestern Pennsylvania has shown a marked improvement in all departments this month, according to reports compiled by the various battery dealer organizations in the district.

The heavy sales of new cars by dealers this summer indicates that the servicing of batteries on these cars will begin before bad weather sets in, and most factors in the trade here are of the opinion that October and early November business will show an even better volume than September.

William F. Nordstrom, U. S. L. distributor, Jamestown, says: "The sales of new cars have been high, and are expected to materially aid our service department business volume during the next six weeks. Invariably, with the approach of winter weather, most motorists look to their batteries, and usually have them put into first class shape for winter use. The outlook, indeed, can be considered very promising for the balance of the year."

The Hause Battery and Electrical Service, Inc., Jamestown, reports a very encouraging outlook for business. This concern specializes in electrical maintenance and battery service.

The Willard Battery Service, Inc., Jamestown, says already a number of motorists have driven new cars into the service station for battery service, complete overhauling, etc.

Massena, N. Y., Sept. 26.—George H. Russell, Hudson-Essex dealer, is erecting a new garage on Center Street on the site formerly occupied by the Reed livery stable. The new building will be one story, 50 feet wide and 80 feet long, and will be modern in every respect both as to building and equipment.

MID-SOUTH FAIR TO HAVE COTTON EXHIBIT

Memphis, Tenn., Sept. 26.—The Mid-South Fair which is on in Memphis September 28-October 5 carries this season a much augmented exhibit and many new features. The story of cotton in its many uses will be a feature of the exhibit prepared by the United States Department of Agriculture for the National Cotton Show. Airplane propeller use, the use in the automobile trade, in the tire, top and upholstery trade will be shown.

Service Notes

Rochester, N. Y., Sept. 26.—The General Parking Stations of Rochester, Inc., has been formed with capital stock of one hundred shares without par value and will engage in the garage business in this city. Among the incorporators are: Maurice G. Ellenbogen, 714 Powers Building; Milo I. Tomanovich, 3 Englert St., and Pauline Mannion, 266 Meigs St., all of Rochester, N. Y.

Sioux City, Ia., Sept. 26.—The Auto Glass Service Station, 500 West 7th St., has been opened by Ralph Day, long experienced in the glass trade. He will specialize in replacement of glass in all model cars.

Corning, Ia., Sept. 26.—John A. Anderson has started construction of a new auto sales and service building, connecting with his oil station and former sales room, and will construct a wall around the quarter block to the south of his buildings for used car storage. The new show room will have a 45-foot front display window.

Rochester, N. Y., Sept. 26.—Overland Rochester, Inc., capital stock of $50,000, will engage in the garage business here. Among the incorporators are Thomas F. Street, Brighton; Arthur T. Street, and Roy G. Miller, both of Rochester.

CALENDAR OF COMING EVENTS

SEPTEMBER

28-Oct. 4—**Atlantic City, N. J.** American Electric Railway Association Convention.
30-Oct. 4—**Cleveland, O.** National Machine Tool Builders' Association Convention.
30-Oct. 4—**Chicago, Ill.** National Safety Congress.

OCTOBER

2- 4—**Cleveland, O.** Society of Automotive Engineers' Production meeting.
3-13—**Paris, France.** Automobile show.
5-12—**Tulsa, Okla.** International Petroleum Exposition.
7- 8—**Houston, Tex.** Texas State Tire Dealers' Association convention.
7- 8—**Erie, Pa.** Pennsylvania Automobile Association ninth annual convention.
7-11—**Washington, D. C.** Permanent International Association of Road Congress, sixth session.
12—**Tulsa, Okla.** Oklahoma Tire Dealers' Association meeting.
12-27—**Dallas, Tex.** Southwestern Automobile Show.
16-18—**Detroit, Mich.** Society of Industrial Engineers Convention.
17-18—**Sioux City, Ia.** Iowa Automotive Dealers' Association, annual convention
17-26—**London, Eng.** Automobile show.
23-25—**Cleveland, O.** Society of Industrial Engineers, sixteenth annual meeting at Hotel Statler.
23-30—**Prague, Czecho-Slovakia.** Automobile show.
24-25—**Washington.** American Road Builders' Association and Aeronautical Chamber of Commerce joint airport conference.
24-26—**Philadelphia, Pa.** American Gear Manufacturers' Convention.
29-Nov. 22—**Tokio, Japan.** World Engineering Congress.
—**Sioux City, Ia.** Automobile Merchants' Association Convention.

NOVEMBER

4-9—**Chicago.** Motor & Equipment Association Annual Business Exhibit.
6- 8—**Detroit, Mich.** National Automotive Parts Association Convention.
7- 8—**Sioux City, Ia.** Iowa Automotive Merchants Association, eleventh annual convention.
7-16—**London, Eng.** Truck show.
9-16—**Chicago, Ill.** Automobile Salon at Hotel Drake.
11-14—**Chicago, Ill.** National Tire Dealers Association Convention and Trade Exhibition at Sherman Hotel.
11-16—**Detroit, Mich.** National Standard Parts Association Show and Convention
12-15—**Toronto, Canada.** Society of Automotive Engineers' Transportation Meeting.
14-24—**Paris, France.** Truck show.

DECEMBER

1- 7—**New York.** Automobile Salon at Hotel Commodore

JANUARY

4-11—**New York.** National Automobile Show.
6- —**New York.** National Automobile Dealers' Association Convention.
9- —**New York.** Society of Automotive Engineers' Annual Dinner.
11-18—**Atlantic City, N. J.** American Roadbuilders' Association Convention.
11-18—**Newark, N. J.** Automobile Trade Association Annual Show.
13-15—**Boston, Mass.** Annual Automobile Show.
21-24—**Detroit, Mich.** Society of Automotive Engineers' Annual Meeting.
25-Feb. 1—**Chicago, Ill.** National Automobile Show.
25-Feb. 1—**Cleveland, O.** Show at Public Auditorium, auspices of Cleveland Automobile Manufacturers and Dealers' Association.
27-28—**Chicago, Ill.** National Automobile and Public Auditorium. Dealers' Association Convention.

DISTRIBUTION
SHOP EQUIPMENT
REPLACEMENTS

WHOLESALE

MERCHANDISING
ACCESSORIES
EQUIPMENT

Oil Jobbers in New Jersey Adopt New U.S. Code to End 'Wildcat' Service Stations

CAMDEN, N. J., Sept. 26—The doom of roadside gasoline stands started without capital has been sounded by the Federal Trade Commission and the National Petroleum Institute, south Jersey oil companies announced yesterday. A code became operative in south Jersey September 1, it was revealed here today. It is aimed at "wildcat" filling stations and will within a few weeks spread throughout the state, it is intimated. Oil jobbers have been behind this move for several years.

The dealer must shoulder installation cost on the underground equipment loaned by the gasoline distributor for establishment of pumps.

Tanks, pumps and pipe lines will be furnished by the distributor as in the past, but the prospective gas dealer must deposit $100 for each underground unit to be installed. If the installation cost is less than $100, a refund will be made. If it is more the dealer will be billed for the amount.

In addition, the dealer must pay all privilege taxes resulting from installation and maintenance of such equipment. If, after installation, he wishes to increase the capacity of his underground tanks, the work will be regarded as a new installation and the dealer must pay its cost.

The rule in question is classified as "Rule 1" in the Federal compilation of the code. Its purpose, according to the institute is "to restrict the practice of installing and loaning equipment free of charge."

Following are some examples of applications of the rule:—

When a dealer or a consumer is loaned equipment for installation at the place of business where, prior to the loan, no equipment had existed the lender must require the borrower to pay the cost of installing the equipment. The rule works also for the consumer who may require such equipment to suit his needs.

When a dealer or a consumer is loaned equipment in addition to that already existing at the place of installation, the lender must require the borrower to pay the cost of installation. For instance, if Dealer X, already having two of Wholesaler B's pumps installed, applies to Wholesaler B or any other wholesaler for the loan and installation of a third pump and tank, the cost of installation must be paid by Dealer X.

When the proposed loan is to replace existing equipment, whether belonging to the new leader or to some one else, the borrower need not be required to pay the cost of installation. For instance, if Dealer X has two of Wholesaler B's pumps, and arranges with B to replace the existing pumps with another, or if he arranged with Wholesaler C to replace one of the B pumps with one of C's, Dealer X need not be required to pay the installation cost.

When the borrower himself installs the equipment at his own expense the lender need not collect any installation cost, even though the unit installed may be an additional one.

Another interpretation of the widespread adoption of the rule is that it foreshadows generally the "squeezing out" of individual dealers. It is viewed in some quarters as the first step in a program aimed at issuance of fewer and fewer pumps, with erection of more distributor-owned stations.

Editor's Column

MANUFACTURERS have been and still are using quantity production methods to make new wholesalers, and it's pretty bad business, for it obviously extends competition among wholesalers and it also increases the manufacturer's cost of doing business by forcing him to serve more accounts in small quantities.

Too many jobbers competing for business cause higher direct selling expense by reducing each salesman's volume and by increasing overhead because of the smaller unit of sales.

Wholesalers are necessary to render a service which few, if any, manufacturers can give to a complete dealer organization. Prosperous wholesalers are profitable customers for manufacturers, and manufacturers, by creating wholesalers frequently on the advice of their field men and usually without further investigation or consideration, are making it harder for jobbers to make money.

Perhaps, if manufacturers of standard goods would sell only those jobbers who have a good selling record, they would make bigger and better profits and the successful jobber would have a chance to operate with a considerably lightened overhead.

Modern sales methods among retailers, store arrangement, good window display and correct pricing are among those things everybody says should be taught to the retailer in order to increase business. Maybe, if the manufacturer and the jobber would get a little closer together and work jointly toward this end, everybody would profit.

But just now all the manufacturers seem to be too busy rooting around greener fields in search of new accounts.

Louisville, Ky., Sept. 26.—The Continental Lumber and Manufacturing Company, Louisville, jobber of lumber and small manufacturers of automotive wood parts in the white, recently suffered fire loss of about $15,000, partly insured, which was followed by the filing of an involuntary petition in bankruptcy against the company by D. A. Sachs, Jr., Louisville attorney, representing several lumber shippers.

TRENTON AUTO RADIATOR DISTRIBUTING CATALOGUES

Trenton, N. J., Sept. 26.—The Trenton Auto Radiator Works is distributing catalogues of its products—the Kramer line of replacement radiators for popular cars, Kramer cellular and tubular cores and Kramer products for tools and supplies in repairing radiators, fenders and bodies.

Three catalogues are being issued, one for each group of products, and copies are obtainable by writing the manufacturer. The Kramer line of radiators has been augmented by several new radiators, and the line now consists of more than sixty models for the fifteen most popular American cars.

MILES BUYS OUT SPENCE IN CENTRAL MOTOR SUPPLY

Auburn, Wash., Sept. 26.—Percy Spence has sold the Central Motor Supply Company of this city to Harry Miles of Prosser, Wash. Roy Miles, son of the new owner of the firm, will be associated with his father in operation of the concern. The firm name has been changed to the Miles Motor Company. Mr. and Mrs. Spence plan to spend several months traveling before returning here.

TROY ENGINE AND MACHINE BUYS OUT ENBERG ELECTRIC

Troy, Pa., Sept. 26.—The Troy Engine and Machine Company has purchased the business and equipment of the Enberg Electric and Mechanical Works, St. Joseph's, Mich. According to an announcement by T. W. Parsons, head of the local concern, it is planned eventually to remove the Michigan plant to this city, but for the present it will be operated at St. Joseph's as a branch plant.

Buffalo, N. Y., Sept. 26.—Plans have been filed by Louis Bernstein for the construction of a modern one-stop super service station at 229-231 East Ferry St., at an estimated cost of $3,880.

Duluth Jobbers Reporting Increase Over 1928 Sales

DULUTH, Minn., Sept. 26.—A survey of the leading jobbers in Duluth reveals that business for the nine months of 1929, as compared with the same period in 1928, is very much better. Though very large increases were not reported, jobbers declare that business in 1929 has shown a tendency to move upward, thus resulting in healthy increases ranging from 12 per cent. to 50 per cent., which is proving encouraging.

The business outlook from the jobbers' standpoint for this coming winter is very bright, due to the public engaging in early buying of winter goods, and as a result, several jobbers report satisfactory sales of increasing size of winter goods as much better than in 1928 at this time of year. Winterfronts and automobile heaters are showing very good activity. Sales of batteries, replacement parts, accessories and shop equipment are much higher than in 1928.

Electrical repair work is reported as being very good, with the same holding true of electrical automotive goods. Increased use of airplanes in the Duluth trading territory will find many jobbers carrying stocks of airplane accessories and replacement parts. One jobber who has gone into that angle of the business reports an increasing demand for aviation repair work and replacement parts used in the work.

The Northern Wheel and Rim Company at 140½ East Superior St., reports that business for 1929 is much better than in 1928 and the outlook bright for the coming months.

Hanson-Duluth Company at 416 East Superior St., reports that business in all lines is good, with a 12 per cent. increase for 1929 over that of 1928.

Paramount Service, Inc., at 521 East Superior St. reports that it is enjoying a good business in airplane repair work which it handles for a local aviation company. A 50 per cent. increase in jobbing business for 1929 over that of 1928 is reported by this jobber. Battery sales show a 100 per cent. increase.

WESTERN AUTO SUPPLY IN MEMPHIS ENLARGES

Memphis, Tenn., Sept. 26.—The Western Auto Supply Company, formerly located at Monroe Avenue and 3d Street, has moved into its new home at Monroe Avenue and 4th Street. The change was made necessary by the expansion program, according to D. E. Adams, Memphis manager.

The new quarters will enable the concern to carry a larger stock. The service entrance of the new store will be on 4th Avenue with the main entrance on Monroe Avenue. The new address is 239-41-45 Monroe Ave.

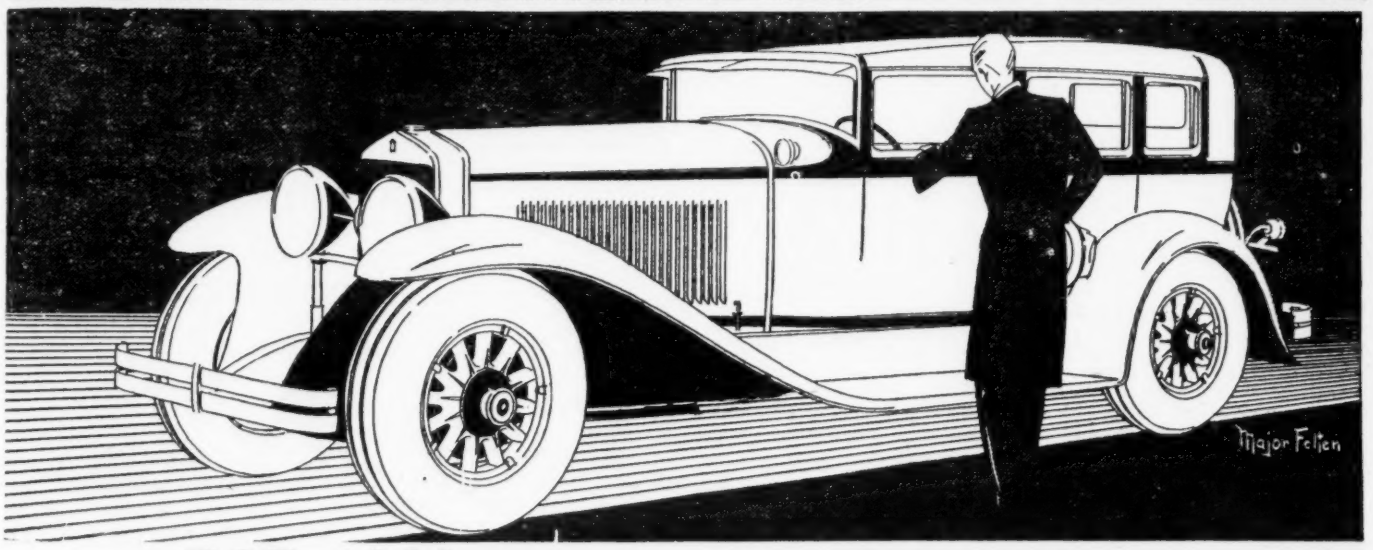
HYMAN STEIN, INC., HAS COMPLETE MACHINE SHOPS

Chester, Pa., Sept. 26.—Hyman Stein, Inc., is now equipped for cylinder reboring in its shop or in the customers' shops. The mechanical service department of this concern consists of piston grinding, piston and pin fitting, valve refacing, connecting rod aligning, brake relining and clutch facing.

This department is under the supervision of Jimmie Brown.

Miami, Fla., Sept. 26 (U. T. P. S.)—Sam's Placé, Inc., of Coral Gables, is opening one of the largest and best equipped of Miami's service stations on S. W. 20th Road and 3d Avenue. The place is known as Sam's Place No. 2, and the approximate cost of building, ground and equipment was $30,000.

Windsor



FOR 1930
The
SIX-SIXTY-NINE
at $1045

¶Windsor Dealers Are Making Money! The addition of the New 6-69 with its smashing *double appeal* of High Value and Low Price still further broadens Windsor's opportunity and *yours.* An aggressive Sales and Advertising Plan is now operative. The details are available to active merchants who need to make more money. *Write or Wire Today.*

WINDSOR CORPORATION , BUILDERS OF SIXES AND EIGHTS , ST. LOUIS

DEALERS: A liberal Windsor franchise is available for certain neighborhoods. Write or wire today for locations and details

Cook County 8 Months' Registration 34.5% Above 1928

FIGURE IS 92,000, AS AGAINST 68,376

Ford Leads List With Chevrolet Holding Second Place

CHICAGO, Sept. 26.—New car registrations in Cook county for eight months were 34.5 per cent. in excess of those for the same period last year. The figures for this year up to Septem-1 were 92,000, as against 68,376 in 1928.

Of the total registrations, Ford accounted for 23,559, with Chevrolet contributing 11,258. The former had a gain of 19,109 over 1928, while Chevrolet, leading the six-cylinder field, had a loss, as compared with its four-cylinder showing of the preceding year.

Closely grouped for third place were Pontiac, Nash and Essex. The General Motors product had a total of 5,795, as against 4,377 last year. Nash registering 5,313, compared with 4,408 in 1928, and Essex 5,145, as against 4,286.

Sixth place went to Buick, with a total of 4,829. While Buick showed a loss during the first half as compared with last year, there has been a noticeable increase in month-by-month comparisons since the introduction of the new models.

Chrysler is combined with Plymouth because the latter four-cylinder offering was not separated from the Chrysler line until the first of this year. The total of 3,782 gave the line seventh position. Last year Chrysler had 3,220.

Studebaker, in eighth position, tied last year's showing, with a total of 3,181.

Then came Oldsmobile with the sensational total of 2,956, which compared with 1,812 last year, the percentage of gain having been 63.1.

Dodge, Graham-Paige, Hudson and Packard were next in order, all with gains over the preceding year. The Packard, leading in its price class, had a total of 2,254, as against 1,961 in 1928.

Other makes to show gains were Oakland, Auburn, La Salle, De Soto, Cadillac, Franklin and Pierce-Arrow. Franklin had a percentage of gain of 97.8 per cent.

In addition to Studebaker, other lines to finish with figures approaching ties with 1928 were Whippet, Stutz, Peerless, Lincoln, Windsor and Stearns.

Computing the groups, the Hudson-Essex combination led the field with a total of 7,519, maintaining the same lead it held last year for the eight months over the rival pair, Oakland-Pontiac. The latter had a total of 7,123, compared with 5,551 in 1928. Hudson-Essex registered 5,979 the preceding year.

Buick-Marquette totaled 5,082, Studebaker-Erskine 3,295, Oldsmobile-Viking 3,177, Willys products 2,982, Cadillac-La Salle 2,057, Marmon-Roosevelt 525 and Stutz-Blackhawk 203.

It is interesting to review the registration figures of the Ford this year to date. The peak month was July, with 4,036, while February turned in the lowest score of 1,426. Oldsmobile started the year with its lowest month, 96 having been the January returns. Month by month, up to July, which was the peak, the line showed a gain. The July figures were 505. Last month Oldsmobile had 422.

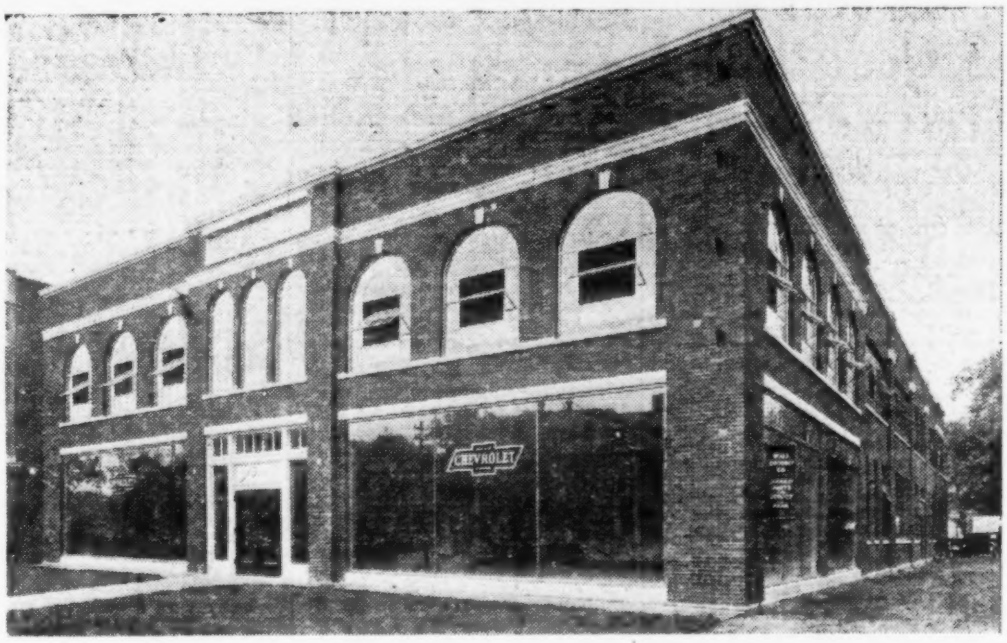
Chevrolet's peak month also was July, with 2,341. Last month it had 1,179, the third lowest since the first of the year. Nash scored its highest in April with 967, Pontiac in May with 1,051, Essex in April with 957, Buick last month with 1,086 and Studebaker in July with 550.

The combined total of the General Motors units showed a slight decline for this year, the total figures being 29,672 for 1928 and 28,697 for 1929.

Following is the showing for the first eight months of this year:—

Ford	23,559
Chevrolet	11,258
Pontiac	5,795
Nash	5,313
Essex	5,145
Buick	4,829
Chrysler-Plymouth	3,732
Studebaker	3,181
Oldsmobile	2,956
Graham-Paige	2,736
Dodge	2,724
Hudson	2,374
Packard	2,254
Whippet	2,080
Hupmobile	1,780
Oakland	1,328
Auburn	1,220
La Salle	1,097
De Sota	1,021
Cadillac	960
Willys-Knight	902
Reo	637
Lincoln	495
Durant	417
Chandler	355
Peerless	352
Roosevelt	337
Franklin	275
Marquette	253
Pierce-Arrow	231
Viking	221
Marmon	188
Stutz	166
Erskine	114
Gardner	113
Windsor	106
Jordan	70
Stearns	42
Blackhawk	37
Locomobile	8
Cord	1
Miscellaneous	1,340

Wall Chevrolet Company in New Home



EDWARD J. WALL formerly of Hartford, Conn., who recently returned to his old haunts in that city to organize the Wall Chevrolet Company, now has his new organization located in the new home, shown above at 491 Farmington Ave. Wall has been connected with the automobile industry in New England for years and will handle Chevrolet sales in the western part of Hartford as well as the wholesale business in the towns west of Hartford.

Buffalo, Sept. 26.—The Imperial Motor Sales Company has been formed at Jamestown to take over the distribution of Chrysler cars in that city. It is opening new sales and service quarters at West 4th and Washington Streets. Berger Nelson is manager of the new company. Carl F. Stratford, who is president of the Overland-Jamestown corporation, holds the same office in the Imperial corporation.

Dealer Activities

Nashville, Tenn., Sept 26—Naron-Platz's used car branch is now in its new home at 1211 Broadway, D. C. Jackson in charge.

Austin, Minn., Sept. 26.—Motor Sales Company, dealer for Graham-Paige, moved from 116 West Water St., to 118 East Water St. A. B. Brown is manager.

Binghamton, N. Y., Sept. 26—A. E. Groner and associates, this city, have organized and incorporated the Groner Chevrolet, Inc., with a capital of $100,000. It is planned to establish and operate a local Chevrolet sales and service station.

Philadelphia, Sept. 26.—Starting today, there is a special showing of Ford cars in the new colors, in the Ford Building, Broad Street and Lehigh Avenue.

Indianapolis, Ind., Sept. 26.—The Peterson-Keyes Auto Company, Peerless and Willys-Knight distributors and the oldest dealers on motor row, have vacated the building occupied by the company since its organization sixteen years ago for larger quarters. The sales and service branches were removed to a building in the same block as their former location, on Capitol Avenue. The new Peterson-Keyes place was for several years the home of the Armacost Automobile Company, Studebaker distributor.

Los Angeles, Sept. 26.—Ground has been broken for the new uptown home of Maddux, Inc., Lincoln dealer. The new structure is rising at the corner of Wilshire Boulevard and Maple Street and will represent an investment of approximately $250,000. It will occupy the full site of 103 by 156 feet.

Buffalo, N. Y., Sept. 26.—H. E. Fremming has sold his interest in the H. D. Smith Company, Inc., Hudson-Essex dealer for the Olean (N. Y.) territory, to L. W. Silloway, former service manager. Mr. Fremming retires from active connection with the agency.

HUDSON REALLOCATES DISTRIBUTOR TERRITORY IN KENTUCKY SECTION

Louisville, Sept. 26.—Through a redistribution of territory, the Fidelity Motor Company, Hudson-Essex dealer and distributor in Louisville, will distribute over about thirty-five to forty counties south, east and west of Louisville. The Imperial Motor Company at Nashville, Tenn., will handle about six counties in western or southern Kentucky, and the Memphis, Tenn., dealer-distributor will also have a few counties in southwestern Kentucky. The Hudson Frampton Company of St. Louis will have some Illinois and western Kentucky territory that was formerly handled from the Louisville factory office.

A. B. Matson, who for nearly a year has been in charge of the Louisville factory office, is now closing up the office and will return to his home at Cincinnati.

T. G. Daley, zone manager at Cincinnati, will continue in charge of the zone, which takes in Kentucky territory. G. W. Pratt, formerly in charge at Louisville and later at Columbus, O., has recently gone with Warren Gideon, Inc., at Knoxville, Tenn., dealer and distributor.

J. Minor Culp, vice-president of the Fidelity Motors Company, who formerly traveled the distributing territory for that company, has returned to it. He will be aided by R. L. Kelly, salesman, formerly with Fidelity, who has been with the Louisville Hudson-Essex branch for nearly a year.

BERRIMAN-GRAHAM CO. STAGING FORMAL OPENING

Buffalo, N. Y., Sept. 26.—This week marks the opening of the new sales and service quarters of the Berriman-Graham Company, Oakland-Pontiac distributor in the north Buffalo territory.

The company has moved into a fine new sales and service establishment erected for it at 2262 Delaware Ave. This is the sixth big development of this character in this immediate locality which is springing up in this neighborhood.

LOUISVILLE CHEVROLET PARTS DEPOT PROGRESSING

Louisville, Ky., Sept. 26.—Work is progressing rapidly on the new supply depot of the Chevrolet Motor Company here, which will distribute Chevrolet parts over territory which heretofore has taken supplies from Indianapolis and Cincinnati.

The plant will be completed this fall.

CUMULATIVE NEW PASSENGER CAR

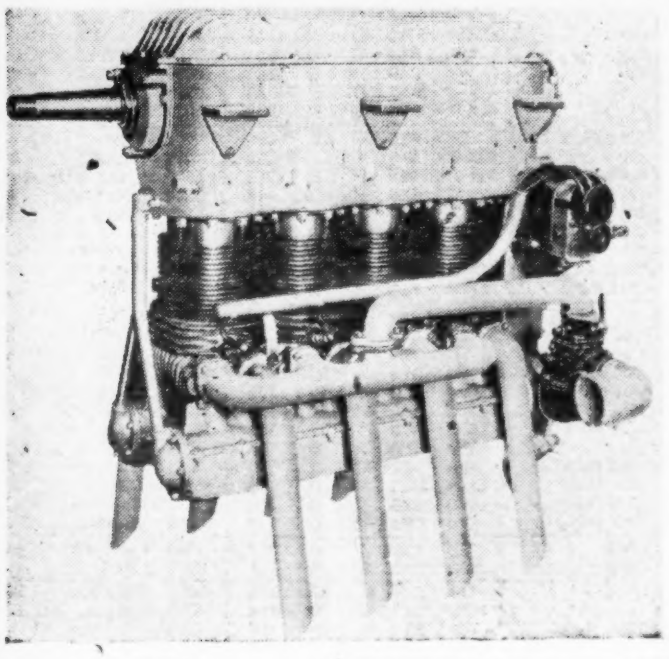
Returns for today: Miss

Some of this data has been published previously, but it is

States	Auburn	Black Hawk	Buick	Cadillac	Chevrolet	Chrysler	DeSoto	Dodge	Durant	Elcar	Erskine	Essex	Ford	Franklin	Gardner	Graham-Paige	Hudson	Hupmobile	Jordan	La Salle	Lincoln
Arkansas	2		91	3	992	61	44	89	28		3	55	1515	3		26	17	12		9	1
Conn'ticut	48	2	489	25	696	201	144	189	37		3	219	1274	30	3	130	94	83	4	43	12
Delaware	8		100	5	134	4	3	7	22			23	306	3		2	17	6		3	1
Florida	7	1	144	12	804	63	22	65	5		6	78	1491	18		61	51	28	3	11	1
Illinois	180	14	1734	94	4091	541	382	570	178	10	35	876	8071	46	16	444	381	252	10	142	57
Maryland	11	2	357	10	1086	114	45	108	58		2	182	1812	15		76	63	75	3	11	5
Minnesota	36		408	4	1539	184	72	132	114	6	24	271	3717	4	2	131	85	85		20	15
Missouri	29	4	546	32	3091	145	112	272	128	1	7	371	6017	31	16	166	113	130	2	42	9
Montana	13		115	1	545	51	33	110	52		5	83	886	18		57	37	27		3	
N. Hamp.	7		80	4	222	37	25	37	26			54	358	7		17	19	12	2	4	
N. Jersey	140	13	1105	44	1740	428	182	242	90	4	16	499	3447	41	17	232	246	228	13	49	17
N. Ca'lina			222	3	1091	99	48	101	20		2	113	2313	4		33	54	8		9	4
N. Dakota	2	1	36		264	20	10	17	18		1	27	586			11	11	2		2	2
Oregon	8		166	3	641	67	36	78	163		3	88	1360	8	1	50	40	24		7	3
Pennsy	186	17	2052	71	4226	950	929	670	337	8	25	1220	9258	117	12	545	474	405	43	124	29
Rh. Island	22		175	18	304	87	80	78	18		1	110	429	16	2	50	35	35		25	9
S. Ca'lina			114	1	967	40	31	22	8		3	45	1653	5		7	40	13		5	
S. Dakota	6	1	69		595	29	14	68	47		9	68	920	1		27	23	27		2	
Utah	6		91	2	271	25	19	24	61		2	48	536	3		32	15	13		5	1
Virginia	13	1	221	7	1539	89	65	119	43		4	198	2559	8		50	51	35	1	12	3
W. Va.	7	5	159	6	889	85	56	121	33		3	140	1393	4		91	45	30	1	11	4
Wisconsin	9	1	613	6	1506	143	101	180	86	6	18	338	2824	15		137	178	78		8	14
Wyoming			39		149	22	9	38	9		1	26	305	2		8	8	13		1	1
Dis. of Col.	13		215	12	399	60	18	15	7		1	90	919	8		75	26	43	2	24	4

Latest Engineering News of the Industry

Chevrolet Engine Dual Type



Duplicate Parts for Those Apt to Fail

ARTHUR CHEVROLET gives an interesting explanation of the reason for dual construction in his new aviation engine, illustrated herewith. He said: "It might be said that the laws of nature which gave all animals duplicate members of the body were followed in the design of this motor. A man has two eyes, two arms, two legs, two ears and so on, with the result that if one member is lost, the other can take its place. So it is with this motor. Failure of one oil feed control, one carburetor, one cam shaft, one gasoline line, one set of valves and so on, will not reduce the dependability of the motor, and, above all, will not occasion power plant stops and dangerous forced landings."

The motor has been built so as to guard against adjustments coming loose. It is so constructed that after it has been assembled no adjustments are required. In addition, the motor embodies an emergency oil flow control that traps the oil in the motor in the event of leaks in the oil lines, enabling the pilot to make a safe landing.

Before Chevrolet designed his motor, he sought the ideas of the country's leading plane manufacturers. As a result, his motor is of air-cooled, inverted, in-line design to reduce head resistance one third (as compared with ordinary radial motors) and to increase the pilot's field of vision. Besides, it is said to develop greater horse power and speed in proportion to its weight.

The ordinary head width of the radial motor of forty inches is reduced to twelve on this in-line motor. The over-all width is only twenty-one inches. The height is only twenty-nine inches, and the weight only 325 pounds for the D-4 (four cylinder) model. This model has a manufacturers' rating of 120 horse power at 2,400 revolutions per minute. Normal revolutions are 2,200 and maximum 3,000.

Portland, Ore., Sept. 26.—The Portland Motor Car Company, Hudson-Essex distributors, has opened two branch stores, according to an announcement by C. P. Finlay, general manager. One of the branches is in Gresham, Ore., in the Stager and Amsbury Garage; the other is in the Hollywood district, Portland, managed by W. P. Montgomery. The Gresham store will be under the management of O. D. Darling.

Northwest S. A. E. Has First Session

SEATTLE, Wash., Sept. 26.—The first fall meeting of the Northwest Section, Society of Automotive Engineers, was held Saturday night at the Tacoma Hotel, with sixty members present. Seattle was well represented at the Tacoma meeting, while members from Portland were also present.

Discussion of the challenge for Class C outboard motor boats, hurled by the Metropolitan section (New York City), was enthusiastic and the Northwest section is considering accepting the defi. In that event the race would probably be on Saranac Lake at the next national convention. President Robert S. Taylor, who presided at the Tacoma meeting, pointed out that the Northwest has several records for this class of motor craft.

Thirty new members joined the group and plans are for still further increase. Tacoma and Seattle will probably join in a contest on membership with Portland and all the rest of the Northwest section.

J. D. Guiss, headlight expert for the state, gave an "illuminating" talk on automotive headlights and new legal points connected therewith. He explained the eight-point requirements and testing for same. Mr. Guiss declared that many new cars are going out of the dealerships without proper adjustment, this being especially the case with the two-filament jobs, where the upper or driving light is apt to throw its rays too high, and thus be a menace, against the legal requirements. "That it the important light," said Mr. Guiss, "and dealers are cautioned to see that the adjustment is proper."

Percy F. Brush, president of the Tacoma Bar Association, gave a typical after-dinner speech, but also referred to some automotive legal points. He was especially interested in remarks of Mr. Guiss on lights.

J. Warner of the Mack International Truck Company branch was in charge of the entertainment and arranged the program. The sidewalks were left after 9 p. m., as Mr. Warner had assured the members in advance.

Next meeting will be in Seattle, October 12 or 19, and aviation will be the topic.

SOUTHERN TIER A. S. S. T. SEES STEEL TREATMENT FILM

BINGHAMTON, N. Y., Sept. 26.—A motion picture film, "The Story of Heat Treatment of Steel," was the outstanding feature at the monthly meeting of the Southern Tier Chapter, American Society for Steel Treating, held at Endicott, N. Y., in the Hotel Frederick, September 21. G. M. Thrasher, the Kennedy Valve Manufacturing Company, was in charge of the meeting.

McCORD HAS TOOL FOR REGRINDING FORD VALVES

THIS announcement will be of special interest to the mechanic and garage owner, as the McCord "Guide-A-Valve," it is claimed, will allow them a larger profit in the grinding of Ford A valve, due to the amount of time saved.

The design of the standard Ford "A" valve guide makes it necessary to remove these pieces from the valve every time an inspection is necessary, which is very unhandy and wastes time. The McCord "Guide-A-Valve" eliminates this condition entirely.

This ingenious little tool not only is claimed to pay for itself in two grindings, through saved time, but, in addition, is said to allow more frequent inspections with no more effort or trouble than it takes to lift the valve out of the block.

Very simple in design and principle and most practical in use, it is expected that this device will prove a popular addition to the tool kit of every mechanic.

The following are instructions for operating the tool, which will give a better idea of its use and simplicity:—

Remove the valve by taking off the spring retainer, the valve spring, and removing the two-piece valve guide. Apply the McCord "Guide-A-Valve," place the nut on the valve stem first and then apply the two split sections below the nut. Tighten the nut, and the valve is ready to insert in the block and grind.

S. A. E. and S. O. to Hold Joint Session

THE Pennsylvania section of the Society of Automotive Engineers and the Standard Oil Company of New Jersey will conduct a joint meeting at Elizabeth, N. J., on October 9. The group will assemble between 11.30 and 12 o'clock noon at the Winfield-Scott Hotel, Elizabeth. Luncheon will be served by the company, and the following papers will be presented: "Laboratory Testing of Lubricants Under Summer and Winter Conditions" and "Gum in Gasoline." The meeting will then adjourn and visit the Standard Oil Company's refinery and research department, where the method of testing lubricants, etc., will be shown.

Dinner will then be served, and the following papers presented: "Fuel Specifications from the Purchaser's Standpoint" and "Practical Significance of Gasoline Knock Ratings."

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

Pioneer Making Air Speed Indicator

THE Pioneer air speed indicator is a sensitive differential pressure gauge. It consists essentially of a metal diaphragm, the inside of which is subjected to the impact pressure transmitted from the open end of a Pitot static tube, and the outside of which is subject to the static pressure. The differential pressures are proportional to the square of the speed of the air flow past the Pitot statis tube. A multiplying mechanism connects the diaphragm to the hand and produces an indication in terms of air speed at sea level. Corrections for

PIONEER air speed indicator dial which is calibrated in miles per hour.

altitude may be made by reference to a chart which is provided.

Pioneer Pitot static tubes are made in several different forms to suit all types of aircraft. Electrically heated Pitot stattic tubes are available fo ruse on airplanes which may encounter freezing conditions.

Both types of indicator and Pitot static tubes are equipped with metal-to-metal fittings, and two special T's are suplied which may be used both for an intermediate tube connection (as for example at juncture of wing and fuselage) and as drains. Line unions can be supplied for use at other junction points, the use of ¼ inch outside diameter copper tubing is recommended, but instruments

USUAL biplane type of Pitot tube used with Pioneer air speed indicator.

and Pitot static tubes will be equipped with fittings for ¼ inch tubing when so ordered.

Changes in air speed directly reflect changes in longitudinal angle of the airplane. If the nose goes down the air speed goes up, and vice versa. For this reason many pilots like to have the air speed indicator dial graduated so that the hand is horizontal (level), and to the right, at the normal cruising speed. The movement of the hand then follows directly the movement of the nose of the ship, pointing down when the nose goes down and up when the nose goes up.

APCO HAS MODEL A FORD ANTI-RATTLER

THE Apco Mossberg Corporation of Attleboro, Mass., has a new Ford brake rod anti-rattler. These brake rod anit-rattlers are simple, both in point of design and installation, which requires but a few minutes and no other tools than a screwdriver and a wrench.

To attach—The rear anti-rattler fastens between frame and brake rod, the front anti-rattler from fender-splash guard bolt to brake rod.

All rattles, as well as interferences and clashings of brake rods and shock absorbers, are eliminated, it is claimed.

Apco No. 59 anti-rattlers are finished in cadmium plate and come packed in display boxes—one set in a box. They weigh one-half pound.

REGISTRATION TABLE, AUGUST, 1929

ouri and Pennsylvania

given here complete for the convenience of our subscribers

States	Locomobile	Marmon	Marquette	Nash	Oakland	Oldsmobile	Packard	Peerless	Pierce-Arrow	Plymouth	Pontiac	Reo	Roosevelt	Stearns-Knight	Studebaker	Stutz	Viking	Whippet	Willys-Knight	Windsor	Miscellaneous	Totals
Arkansas		2	10	46	7	18	2		4	93	82	6	6		28			97	10			3362
Conn'ticut		18	45	186	51	119	199	21	27	101	217	36	36	4	198	2	8	114	65	2	5	5,180
Delaware			5	30	14	14	26	1	1	19	32		2		20		1	19	4			832
Florida		1	25	54	14	43	23		7	58	78	8	7		19	1	2	78	9		2	3,306
Illinois		44	151	812	218	717	461	89	50	570	1165	90	128	8	753	17	55	771	186	7	300	24,716
Maryland		10	41	116	25	105	83	5	14	84	213	16	16		89	2	5	123	32		1	5,015
Minnesota		11	45	149	52	182	87	9	13	283	430	19	16	1	177	3	7	310	75	3	4	8,725
Missouri		23	56	199	67	287	81	27	37	245	455	40	52		149	3	14	578	79	21	7	13,684
Montana		7	13	97	20	38	6	1	3	119	99	11	17		63		6	109	27		2	2,674
N. Hamp.		7	10	43	9	33	29		2	28	42	3	10		19		1	39	21		1	1,208
N. Jersey		20	74	450	107	360	419	49	59	224	396	53	66	10	468	7	34	222	174	7	10	12,002
N. Ca'lina		5	34	31	32	72	22		1	74	144	5	16		28		7	100	10			4,705
N. Dakota		3	10	24	10	27	4		1	37	35	1	10		15	1	2	86	17			1,293
Oregon		2	20	71	26	58	17		7	83	114	12	20		95		3	53	33		1	3,361
Pennsy	1	88	254	809	195	797	579	71	100	718	1055	106	144	6	730	22	42	835	378	13	35	28,276
Rh. Island		3	14	71	11	54	52	11	9	48	114	24	10	2	64		4	51	44		30	2110
S. Ca'lina		1	15	23	11	27	19		1	47	72	2	8		13		4	50	1			3248
S. Dakota		6	13	34	11	96	4			95	84	1	4		30		5	125	15	2	2	2,433
Utah		2	3	29	3	42	11			17	30	2	4		34	2	2	24	5			1,364
Virginia		8	42	57	42	73	47	5	7	134	216	7	24		69	1	8	219	23		5	6,005
W. Va.		8	33	83	27	96	40	1	3	102	145	22	32		80	2	6	158	38			3,959
Wisconsin		16	61	286	62	221	64	10	25	243	404	16	34		221	3	15	293	57	5	14	8,311
Wyoming		1	8	13	4	22	1			37	25	2	9		15	1	1	28	6			804
Dis. of Col		10	13	61	19	90	69	18	9	29	121	18	13		62	1	3	32	11	1	8	2,519

MAJOR SPECIFICATIONS AND MECHANICAL DETAILS OF

Make and Model	Capacity—tons	Chassis price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gearset	Location	No. Spds. for.	Rear Axle	Final Drive	Reduction in Low	Brakes, foot	Brakes, hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Am. La France Chief	2	3650	Own	6	3¾x5	33.0	Pw	Str	Vac	Rem	Own	C	4	Tim	Wo	31.2	4	D	156	6200	32x6	32x6 D
Am. La France W	3-4	3850	Own 2 R	4	4¼x6	28.9	P&S	Zen	Vac	A B	Own	C	4	Own	D R	47.4	D	R	160	7200	S 36x5	S 36x5 D
Am. La France S	4-4½	5200	Own 5 R	4	4¾x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	Wo	54.4	D	R	165	8900	S 36x6	S 36x6 D
Am. La France V	5	5500	Own 5 R	4	4¾x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	Wo	54.4	D	R	165	9800	S 36x5	S 40x6 D
Am. La France Z	6½	6750	Own 5 R	4	4¾x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	Wo	63.5	D	R	165	10000	S 36x7	S 40x7 D
Am. La France U	7½	6900	Own 5 R	4	4¾x6	36.2	P&S	Zen	Vac	A B	Own	C	4	Own	—	63.5	D	R	165	10500	S 36x7	S 40x8 D
Am. La Fran. Big Chief	6		Own	6	4½x6	48.6	Pw	Zen	Vac	Rem	Own	C	4	Own	D R	32.8	W	D	226	10600	S 40x8	40x8 D
Autocar S A	1½	2750	Her	6	3¾x4½	33.8	Pb	Zen	Vac	L-N	Br-L 35	U	4	Own S A	Sp	27.9	4	R	150	4400	32x6	32x6
Autocar S D	2	3000	Her	6	3¾x4½	33.8	Pb	Zen	Vac	L-N	Br-L 35	U	4	Own S D	D R	33.9	4	R	150	4850	32x6	32x6 D
†Autocar H	3	3750	Own	4	4½x5½	32.4	C S	Str	Gra	A B	Own T	U	4	Own H	D R	48.9	R	R	114	5800	34x5 S	36x10 S
†Autocar S H	3	4000	Her	6	4⅛x4¾	40.8	Pb	Str	Gra	R B	Own T	U	4	Own H	D R	48.9	R	R	114	5800	34x5 S	36x10 S
Autocar T	3	5000	Her	6	4⅜x4¾	45.9	Pb	Str	Vac	R B	Own T	U	4	Own T	D R	72.5	R	R	187	7100	36x8	36x8 D
†Autocar H S	3½	4100	Own	4	4½x5½	32.4	C S	Str	Gra	A B	Own T	U	4	Own J	D R	55.2	R	R	114	6900	34x6 S	36x12 S
†Autocar S H S	3½	4400	Her	6	4⅜x4¾	45.9	Pb	Str	Gra	R B	Own T	U	4	Own J	D R	55.2	R	R	114	7000	34x6 S	36x12 S
Autocar T S	3½	5350	Her	6	4⅜x4¾	45.9	Pb	Str	Vac	R B	Own T	U	4	Own Chs	D R	81.7	R	R	187	7100	36x8	36x8 D
Autocar S C M	5	5000	Her	6	4½x4¾	48.6	Pb	Str	Vac	R B	Own B	C	4	Own M	D R	72.1	R	R	162	8600	34x7 S	36x14 S
Brockway Junior	1	1195	Wis C	4	3¾x5	22.5	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 36001	Sp	21.27	4	Tr	130	3100	30x5	30x5
Brockway J F	1	1195	Wis F	6	3¼x4¼	25.4	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 36001	Sp	21.3	4	Tr	137	3450	30x5	30x5
Brockway C J B F	1½	1475	Wis F	6	3¼x4¼	25.4	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 55001	Sp	21.3	4	Tr	149	3650	32x6	32x6
Brockway E	1½	1765	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	L-N	Br-L 30	U	3	Col 55001	Sp	21.0	4	Tr	139½	3650	32x6	32x6
Brockway E N	1½	1965	Wis N	6	3½x4¼	29.4	Pb	Zen	Vac	Aut	Br-L 35	U	4	Col 55001	Sp	31.3	4	Tr	155¾	4400	32x6	32x6
Brockway S	2	2450	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	L-N	Br-L 35	U	4	Wis 4610	D R	38.79	R	Tr	150¼	5100	S 34x4	S 34x8
Brockway S Y	2	2950	Wis Y	6	3⅜x5	27.3	Pb	Zen	Vac	L-N	Br-L 35	U	4	Wis 4610	D R	35.3	4	Tr	151¾	4950	32x6	34x7
*Brockway K	3	3420	Con K	4	4⅛x5¼	27.2	Pw	Zen	Vac	Eis	Br-L 35	C	4	Tim 65700 S	Wo	41.5	R	D	154⅛	5855	S 36x5	S 36x10
Brockway K R	3	3625	Con L	4	4½x5½	32.4	Pw	Zen	Vac	Eis	Br-L 55	C	4	Tim 65700 S	Wo	36.38	R	D	160⅜	6290	S 36x5	S 36x10
Brockway K W	3	3950	Wis H	6	4 x5	38.2	Pb	Zen	Vac	L-N	Br-L 51	U	4	Wis 69300	D R	33.7	R	D	170	6920	34x7	D 34x7
*Brockway R	4	4200	Con L	4	4½x5½	32.4	Pw	Zen	Vac	Eis	Br-L 55	C	4	Tim 66600	Wo	46.8	R	R	164	7890	S 36x5	S 36x12
Brockway T	5-7	5200	Con B 7	4	5 x6	40.0	Pw	Zen	Vac	Eis	Br-L 60	C	4	Tim 68700	Wo	53.5	R	D	175	10065	S 36x6	S 40x14
Chevrolet	½	400	Own	6	3⅛x3¾	26.3	C S	Car	P	Rem	Own	U	3	Own	Sp	12.68	4	R	107	1815	4.50x20	4.50x20
Chevrolet	1½	545	Own	6	3⅛x3¾	26.3	C S	Car	P	Rem	Own	U	4	Own	Sp	30.05	4	R	131	2375	30x5	30x5
Commerce 20 Y	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	B 30x5	B 30x5
Commerce S 11 Y	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	B 30x5	D B 30x5
Commerce 30 Z	1½	2900	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4700	B 34x5	D B 34x5
Commerce 40 Z	2	3240	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vas	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	B 36x6	D B 36x6
Commerce 50 Z	2½	4415	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7000	S 36x5	S 36x10
Commerce 60 Z	3	4430	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7100	S 36x5	S 36x12
Commerce 70 Z	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8200	S 36x6	S 36x12
Commerce 80 Z	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8400	S 36x6	S 36x14
Day Elder M F	1¼	1345	Con 16-C	6	3⅜x4⅜	27.3	Pb	Zen	Vac	Rem	Br-L 20A	U	3	Tim 52000 H	Sp	24.2	4	D	131	3100	30x5	30x5
Day Elder G F	1½	2050	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Rem	Br-L 20A	U	3	Tim 54000 H	Sp	28.3	4	D	156	3900	30x5	32x6
Day Elder H F	2	2500	Con 16-C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	Rem	Br-L 35	U	4	Tim 63702 H	Wo	40.7	4	D	156	4400	S 34x4	S 34x7
Day Elder J F	3	3900	Con 18 R	6	4 x4½	38.4	Pb	Zen	Vac	Rem	Br-L 51	U	4	Tim 65000 H	Wo	41.5	4	D	156	6500	S 36x5	S 36x10
Day Elder K 6	4-5	4775	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	Vac	Rem	Br-L 60	C	4	Tim 66702 D	Wo	55.2	R	D	170	8500	S 36x5	S 36x12
Diamond T 151	1	1095	Con 18 E	6	3⅜x4	27.3	Pb	Zen	Gra	Aut	Cov	U	3	Col	Sp	—	4	D	132	3200	30x5	30x5
Diamond T 290	1½	1475	Her W X A	6	3½x4½	29.4	Pb	Zen	Gra	Aut	Cov	U	4	Col	Sp	—	4	D	156¼	4160	30x5	30x5 D
Diamond T 302	2	1650	Her W X B	6	3¾x4½	33.8	Pb	Zen	Gra	Aut	Cov	U	4	Clark	Sp	—	4	D	157¾	4600	32x6	32x6 D
Diamond T 502	2½	2675	Her W X C	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Wo	—	4	D	163	5850	34x7	34x7 D
Diamond T 505	2½	2875	Her W X C	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Wis	D R	—	4	D	171½	5850	34x7	34x7 D
Diamond T 550	2½	2195	Her W X C	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Clark	Sp	—	4	D	165	5400	32x6	32x6 D
Diamond T 601	3	3510	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Br-L	A	4	Tim	Wo	—	4	D	163½	7400	36x8	36x8 D
Diamond T 605	3	3810	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	U	4	Wis	D R	—	4	D	161½	7400	36x8	36x8 D
Diamond T 700	3½	4850	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	A	4	Tim	Wo	—	R	D	162	8100	S 36x5	S 36x10
Diamond T 800	4	5325	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Br-L	A	7	Own	Wo	—	4	D	195⅜	8300	36x8	4WH 36x8
Diamond T 1000	5	5500	Her Y X C 2	6	4½x4¾	48.6	Pb	Zen	Gra	Aut	Br-L	A	4	Tim	Wo	—	R	D	170½	10000	S 36x6	S 40x12
Diamond T 2500	10-12	9750	Wak	6	5 x5¾	60.0	Pb	Zen	Gra	Aut	Br-L	A	7	Tim	Wo	—	4	D	194	13100	S 36x7	S4W 36x12
Dodge Bros.	½	665	Own	4	3⅝x4¼	21.03	Pb	Stw	Vac	N E	Own	U	3	Own	Sp	15.2	4	D	110	1965	29x5.00 B	29x5.00 B
Dodge Bros.	¾	775	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	Own	U	3	Own	Sp	17.4	4	D	120	2510	31x5.25 B	31x5.25 B
Dodge Bros.	1	995	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	W-G	U	4	Own	Sp	23.8	4	D	130	2920	30x5	30x5
Dodge Bros.	1	1065	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	W-G	U	4	Own	Sp	23.8	4	D	140	2955	30x5	30x5
Dodge Bros.	1½	1345	Own	6	3⅜x3⅞	27.8	Pb	Stw	Vac	N E	Own	U	4	Own	Sp	36.8	4	D	150	3695	32x6	32x6
Dodge Bros.	1½	1415	Own	6	3⅜x3⅞	27.3	Pb	Stw	Vac	N E	Own	U	4	Own	Sp	36.8	4	D	165	3610	32x6	32x6
Dodge Bros.	2	1445	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	41.4	4	D	114	3725	32x6	34x7
Dodge Bros.	2	1545	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	41.4	4	D	150	3930	32x6	34x7
Dodge Bros.	2	1615	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	41.4	4	D	165	4070	32x6	34x7
Dodge Bros.	3	1745	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	N E	Own	U	4	Own	Sp	46.3	4	D	135	4225	32x6	32x6 D
Dover	¾	595	Own	6	2⅞x4½	18.27	P&S	Mar	Vac	Aut	Own	U	3	Own	Sp	..	4	4	110	2150	30x5	31x5.50
Durant Com. Chassis	½	495	Con	4	3⅜x4¼	18.2	Pb	Til	Vac	Aut	Own	C	3	Own	Sp	16.16	4	4	107	1670	28x4.75	28x4.75
Fargo Packet	½	545	Own	6	3 x4⅛	21.6	Pb	Str	Vac	N E	Own	U	3	Own	Sp	14.29	4	Tr	—	1835	5.00x19	5.00x19
Fargo Clipper	¾	725	Own	6	3⅛x4¼	23.4	Pb	Str	Vac	Rem	Own	U	3	Own	Sp	15.53	4	Tr	—	2325	5.50x18	5.50x18
Fargo Freighter	1	795	Own	6	3 x4¼	21.6	Pb	Str	Vac	N E	Own	U	4	Own	Sp	37.19	4	Tr	133	2785	6.00x20	32x6
Ford A A	1½	540	Own	4	3⅞x4¼	24.0	P&S	Zen	Gra	Own	Own	U	3	Own	Wo	16.1	4	4	131½	2282	6.00x20	32x6
F. W. D.—H	2	3300	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Cotta	C	4	Own	St	38.1	4	k	121	5300	34x7	34x7
F. W. D.—H 6	2	3425	Wak	6	3½x4½	29.4	Pb	Zen	Vac	Eis	Br-L	U	4	Own	St	35.0	4	R	133	5500	34x7	34x7
F. W. D.—B	3	4200	Own	4	4¾x5½	36.1	Pb	Str	Gra	Eis	Own	C	3	Own	St	35.6	4	R	124	6460	36x6 S	36x6 S
F. W. D.—B 5	3	4525	Own	4	4¾x5½	36.1	Pb	Str	Gra	Eis	Own	C	5	Own	St	88.6	4	R	132	6800	36x6 S	36x6 S
F. W. D.—U 6	3½	4575	Wak	6	4 x4¾	38.6	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7200	36x6 S	36x8 S
F. W. D.—BTL 4	2	3900	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Br-L	C	7	Own	St	84.7	4	R	120	6000	36x8	36x8
F. W. D.—B T	3	4742	Own	4	4¾x5½	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	101.0	4	R	133¾	7700	40x7 S	40x5 S D
F. W. D.—U 4	3	4575	Own	4	4¾x5½	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7000	36x6 S	36x6 S
F. W. D.—X 6	6	6500	Wak	6	4¼x4¾	43.3	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	4	4	170	9500	36x8	36x8
Garford 20 Y	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	B 30x5	B 30x5
Garford S 11 Y	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	B 30x5	D B 30x5
Garford 30 Z	1½	2990	Bud D S 6	6	3⅜x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4700	B 34x5	D B 34x5
Garford 40 Z	2	3240	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	B 36x6	D B 36x6
Garford 50 Z	2½	4419	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7000	S 36x5	S 36x10
Garford 60 Z	3	4480	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7100	S 36x5	S 36x12
Garford 70 Z	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8200	S 36x6	S 36x12
Garford 80 Z	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8400	S 36x6	S 36x14
Gen. Mot. T 11-1001	*3800	625	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	Rem	Pontiac	U	3	Pontiac	Sp	14.67	4	D	109⅝	1980	5.00x19 B	5.50x19 B
Gen. Mot. T 19-2001	*8000	1015	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	Rem	Mun	U	4	Tim 5261-N	Sp	34.11	4	D	127¾	3075	32x6	34x7
Gen. Mot. T 19-2002	*8000	975	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	Rem	Mun	U	4	Tim 5261-N	Sp	34.11	4	D	127¾	3000	30x5	30x5 D
Gen. Mot. T 19-2003	*6000	895	Pontiac	6	3⅛x3⅞	26.3	Pb	Mar	P	Rem	Mun	U	4	Tim 5261-N	Sp	34.11	4	D	127¾	2925	5.50x20 B	32x6
Gen. Mot. T 30-3001	*10000	1530	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Eat 1616	Sp	28.6	4	D	136	4200	32x6	36x8
Gen. Mot. T 30-3002	*10000	1505	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Eat 1616	Sp	28.6	4	D	136	4125	32x6	32x6 D
Gen. Mot. T 30-3003	*8000	1395	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Eat 1616	Sp	28.6	4	D	136	4075	6.00x20 B	34x7
Gen. Mot. T 42-4001	*12000	1885	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Own	Sp	33.38	4	D	136	4690	32x6	36x9
Gen. Mot. T 42-4002	*12000	1790	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Own	Sp	33.38	4	D	136	4640	32x6	32x6 D
Gen. Mot. T 42-4003	*10000	1685	Buick	6	3⅛x4⅝	26.3	Pb	Mar	P	Rem	Mun	U	4	Own	Sp	33.38	4	D	136	4510	7.00x20 P	36x8
Gen. Mot. T 60-5001	*16000	3215	Buick	6	3⅝x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 65706-N	Wo	44.81	4	D	140	6090	38x7	44x10
Gen. Mot. T 60-5002	*18000	3160	Buick	6	3⅝x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 65706-N	Wo	44.81	4	D	140	6425	36x8	36x8 D
Gen. Mot. T 60-5003	*14500	2800	Buick	6	3⅝x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 65706-N	Wo	44.81	4	D	140	6090	36x6	36x6 D
Gen. Mot. T 60 S-6101	*22000	3960	Buick	6	3⅝x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 66704-N	Wo	63.84	4	D	140¾	6920	38x7	38x9 D
Gen. Mot. T 60 S-6102	*19000	3695	Buick	6	3⅝x5	31.5	Pb	Mar	P	Rem	Mun	U	4	Tim 66704-N	Wo	63.84	4	D	140¾	6890	36x8	36x8 D
Gen. Mot. K 102-6001	*28000	4250	Own 89	4	4½x6½	32.4	Pw	Zen	Vac	Eis	Mun	C	7	Tim 67600	Wo	86.3	R	R	160	9520	36x6 S	40x14 S
Gen. Mot. K 102-6002	*28000	4350	Own 89	4	4½x6½	32.4	Pw	Zen	Vac	Eis	Mun	C	7	Tim 67600	Wo	86.3	R	R	184	9600	36x6 S	40x14 S
Gramm B	1½	1395	Lyc S	6	3¼x4½	25.3	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	32	4	R	140	3300	30x5	30x5 D
Gramm C	2	1795	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	29	4	R	160	3800	32x6	32x6 D
Gramm D	2½	1995	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	30	4	R	160	4920	32x6	32x6 D
Gramm E	3	2795	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	35	4	R	150	5200	34x7	34x7 D
Gramm EY	3	3535	Con 20 R	6	4⅛x4¾	36.04	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	26	4	R	190	6750	32x6	32x6 D
Gramm GY	4	4345	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	P	L-N	Ful	U	4	Wis	D R	28	4	R	210	7200	34x7	34x7 D
Gramm HY	5	6545	Con 16 H	6	4⅝x5¾	54.15	Pb	Zen	P	L-N	Ful	U	4	Wis	D R	25.2	4	R	236	9600	36x8	36x8 D
Gramm T-35	3	3595	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	39.6	4	R	173	7100	36x5 S	36x10 S

1929 COMMERCIAL CARS BUILT IN THE UNITED STATES

Make and Model	Capacity—tons	Chassis price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gearset	Location	No. Spds. for.	Rear Axle	Final Drive	Reduction in Low	Brakes, foot	Brakes, hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Gramm T-45	4	3995	Lyc T S	6	3⅞x5	36.2	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	39.6	4	R	173	7600	36x5 S	36x12 S
Gramm T-60	5	4745	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	Vac	Aut	Ful	U	4	Wis	D R	—	4	R	173	8700	36x6 S	36x14 S
Hahn 7 H	¾-1	1098	——	6	2⅞x4¾	19.84	P	Zen	Vac	Aut	Br-L	U	3	——	Sp	5.8	4	D	124	3100	——	——
Hahn 17 H	1-1½	1430	Cont	6	3⅜x4	—	P	Zen	Vac	—	Br-L	U	4	Tim	—	5.8	4	D	142	3750	——	——
Hahn 37 H-37 H L	2-2½	1925	Cont	6	3⅜x4	—	P	Str	Vac	—	Br-L	U	4	Tim	—	5⅛	4	D	153	4600	——	——
Hahn 39 H-39 H L	2½-3	2898	Cont	6	4 x4⅛	38.4	P	Str	Vac	—	Br-L	U	4	Tim	—	6⅛	4	D	164	5800	——	——
Hahn 47 H B-47 H B L	3-3½	3700	Cont	6	4 x4½	38.4	P	Str	Vac	—	Br-L	U	4	Tim	—	7.8	4	D	151	6900	——	——
Hahn 47 H D-47 H D L	3½-4	3900	Cont	6	4 x4½	38.4	P	Str	Vac	—	Br-L	U	4	Tim	—	7.8	4	D	151	7500	——	——
Hahn 67 H-67 H L	4-5	4950	Cont	6	4⅜x4¾	45.94	P	Str	Vac	—	Br-L	U	4	Tim	—	10.8	4	D	151	8842	——	——
Indiana 200	1	1195	Wis F	6	3¼x4½	25.3	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 36000	Sp	20.71	4	Tr	137	3400	30x5	30x5
Indiana 300	1½	1475	Wis F	6	3¼x5¼	25.3	Pb	Zen	Vac	Aut	Br-L 20	U	3	Col 55001	Sp	21.26	4	Tr	149	3650	32x6	32x6
Indiana 111 X W	2	1850	Her Ox	4	4 x5	25.6	Pb	Str	Vac	Eis	Br-L 35	U	4	Wis 4611	Sp	36.60	R	Tr	120	3830	32x6	32x6 D
Indiana 400	2	2495	Wis Y	6	3⅜x5	27.3	Pb	Str	Vac	Aut	Br-L 35	U	4	Cla B 506	Sp	30.33	4	Tr	157	4800	32x6	34x7
Indiana 115 A	2½	2740	Her Ox	4	4 x5	25.6	Pb	Str	Vac	Eis	Br-L 35	U	4	Cla B 720	Sp	42.80	R	Tr	132	5000	32x6	34x7 D
Indiana 615 A	2½	3070	Wis Y	6	3⅜x5	27.3	Pb	Str	Vac	Eis	Br-L 35	U	4	Cla B 720	Sp	30.33	R	Tr	136	5190	32x6	34x7 D
Indiana 126	3	3495	Her L	4	4½x5¾	32.4	Pb	Str	Vac	Eis	Br-L 557	C	7	Tim 65704	Wo	80.7	R	Js	162½	7400	36x5	36x10 S
Indiana 127	3	3190	Her K	4	4¼x5¾	28.9	Pb	Str	Vac	Eis	Br-L 51	U	5	Cla B 720	Sp	41.72	R	R	141	6490	32x6	34x7 D
Indiana 626	3	4185	Wis H	6	4 x5	38.4	Pb	Str	Vac	Eis	Br-L 55	C	7	Tim 65704	Wo	80.7	R	Js	168½	7625	36x6 S	36x10 S
Indiana 627	3	3725	Wis H	6	4 x5	38.4	Pb	Str	Vac	Aut	Br-L 55	U	4	Cla B 720	Sp	42.80	R	R	162½	6500	36x5 S	36x10 S
Indiana 127 A W	3	3625	Her K	4	4¼x5¾	28.9	Pb	Str	Vac	Eis	Br-L 51	U	5	Wis 69311	Sp	41.72	R	Tr	141	6800	32x6	34x7 D
Indiana 627 A W	3	3925	Wis H	6	4 x5	38.4	Pb	Str	Vac	Eis	Br-L 51	U	5	Wis 69311	Sp	41.72	R	Tr	147	6800	32x6	34x7 D
Indiana 138	4	4380	Her L	4	4½x5¾	32.4	Pb	Str	Vac	Eis	Br-L 60	C	7	Tim 66700 D	Wo	83.1	R	R	162½	7850	36x5	36x12 S
Indiana 638	4	4955	Wis H	6	4 x5	38.4	Pb	Str	Vac	Eis	Br-L 60	C	7	Tim 66700 D	Wo	83.1	R	R	168½	8100	36x5	36x12 S
Indiana 41	5	5460	Her G	4	4¾x5¾	36.1	Pb	Str	Vac	Eis	Br-L 60	C	7	Tim 63700 D	Wo	95.0	R	R	172	9600	36x6	40x12 S
Int. Harvester Sp. Del.	¾	720	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	Rem	Mec	U	3	Eat 502 R	Sp	15.1	4	4	124	2200	30x5.25	30x5.25
Int. Harv. 6 Spd. Spec.	1	820	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	Rem	Mec	U	3	Eat 1124	Sp	*52.6	4	4	124	2430	30x5	30x5
Int. Harvester S-24	1¼	1160	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	Rem	Own	U	3	Eat 1002	Sp	21.3	4	4	130	3200	30x5	30x5
Int. Harvester S-26	1¼	1310	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	Rem	Own	U	3	Eat 1002	Sp	21.3	4	4	130	3250	30x5	30x5
Int. Harvester SF-34	1½	1450	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	Rem	Own	U	3	Eat 1502	Sp	22.6	4	4	140	3520	30x5	32x6
Int. Harvester SF-36	1½	1600	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	Rem	Own	U	3	Eat 1502	Sp	22.6	4	4	140	3570	30x5	32x6
Int. Harvester SD-44	2	1590	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	A B	Own	U	4	Eat 2002	Sp	40.6	4	4	117	3700	30x5	32x6
Int. Harvester SD-46	2	1740	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	A B	Own	U	4	Eat 2002	Sp	40.6	4	4	117	3750	30x5	32x6
Int. Harvester SF-46	2	1950	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	Rem	Own	U	4	Eat 2002	Sp	40.6	4	4	140	4000	32x6	32x6 D
Int. Harvester 54-C	2½	3200	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Own A M 428	Ch	51.8	R	D	140	6400	36x5	36x10
Int. Harvester 54	2½	3550	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Eat 54 65000	D R	53.7	R	D	140	6345	36x5	36x8
Int. Harvester 74-C	3½	4550	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Own A M 427	Ch	*86.0	R	D	154	8715	36x6	40x12
Int. Harvester 74	3½	4550	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Eat 74 1000	D R	61.6	R	D	160	8175	36x6	40x12
Int. Harvester 104-C	5	4800	Own	4	4¼x5	28.9	C S	Zen	Gra	R B	Own	U	4	Own A M 427	Ch	86.0	R	D	154	8890	36x6	40x14
Int. Harvester HS-54	2½	3850	H-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	R B	Own	U	5	Eat 54 65000	D R	60.5	4	4	*148	8000	36x5	36x12 S
Int. Harvester HS-54-C	2½	3850	do 151	4	4¼x5½	28.9	Pb	Zen	Vac	R B	Own	U	5	Own A M 428	Ch	63.8	4	4	*148	8665	34x5 S	36x12 S
Int. Harvester HS-74	3½	4850	do 152	4	4¾x5½	36.1	Pb	Zen	Vac	R B	Own	U	5	Eat 74 1000	D R	70.5	4	4	*160	10700	34x5 S	36x7 D
Int. Harvester HS-74-C	3½	4850	do 152	4	4¾x5½	36.1	Pb	Zen	Vac	R B	Own	U	5	Own A M 427	Ch	79.1	4	4	*160	11000	34x6 S	36x7 D
Int. Harv's'r NS-104-C	5	5500	do 152	4	4¾x5½	36.1	Pb	Zen	Vac	R B	Own	U	5	Own A M 427	Ch	90.5	4	4	*160	11095	34x6	36x8 D
*Larrabee 20	1	1595	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Gra	Rem	Br-L	U	3	Col	Sp	4.15	4	D	142	4170	30x5	30x5
*Larrabee 30	1½	1875	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Gra	Rem	Br-L	U	3	Col	Sp	4.15	4	D	161	4550	32x6	32x6
*Larrabee 40	2	2965	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	Gra	Rem	Br-L	U	4	Wis	D R	5.35	4	D	176	5950	32x6	32x6 D
*Larrabee 50	2½	3285	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	Gra	Rem	Br-L	U	4	Wis	D R	5.35	4	D	183	6030	32x6	32x6 D
*Larrabee 60	3	3980	Con 18 R	6	4 x4½	38.4	Pb	Zen	Gra	Rem	Br-L	U	4	Tim	Wo	5.35	4	D	195	7140	34x7	34x7 D
*Larrabee 70	3½	4600	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	Gra	Rem	Br-L	C	7	Tim	Wo	9.5	4	D	205	7740	34x7	34x7 D
Larrabee 80	5	5200	Con 21 R	6	4⅜x4¾		Pb	Zen	Gra	Rem	Br-L	C	7	Tim	Wo	—	4	D	205	9150	36x8	36x8 D
Mack BB	1½	3500	Own	4	4¼x5	28.9	P&S	Str	Vac	N E	Own	U	4	Own	Hyp.	Opt.	4	D	165½	——	32x6	32x6 D
Mack BB	1½	3660	Own	4	4¼x5	28.9	P&S	Str	Vac	N E	Own	U	4	Own	Hyp.	Opt.	4	D	177½	——	32x6	32x6 D
Mack AB	1½-2	3100	Own	4	4¼x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	Ch.	Opt.	R	D	2-Opt.	——	36x4 S	36x7 S
Mack AB	1½-2	3550	Own	4	4¼x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	D R	Opt.	R	D	2-Opt.	——	36x4 S	36x7 S
Mack AB	2½-3	3500	Own	4	4¼x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	Ch.	Opt.	R	D	2-Opt.	——	36x4 S	36x8 S
Mack AB	2½-3	3950	Own	4	4¼x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	D R	Opt.	R	D	2-Opt.	——	36x4 S	36x8 S
Mack BJ	3-4	5800	Own	6	4½x5½	48.6	P&S	Str	Vac	N E	Own	C	4	Own	D R	Opt.	4	D	3-Opt.	——	36x8	36x8 D
Mack AK	3½-5	5150	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	4	Js	3-Opt.	——	36x5 S	36x5 D S
Mack AK	3½-5	5250	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	C	4	Own	D R	Opt.	4	D	3-Opt.	——	36x5 S	36x5 D S
Mack AC	3½-5	4950	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	R	3-Opt.	——	36x5 S	40x10 S
Mack AC	5½-7	5500	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	R	3-Opt.	——	36x5 S	40x12 S
Mack AC	7½	6000	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	R	3-Opt.	——	36x7 S	40x14 S
Mack AP	7½	9500	Own	6	5 x6	60.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	Js	191	——	36x7 S	40x8 D S
Mack AB Tractor	5-6	3500	Own	4	4½x5	28.9	P&S	Str	Gra	R B	Own	U	4	Own	Ch.	Opt.	R	D	122½	——	36x4 S	36x4 D S
Mack AK Tractor	7-10	5150	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	4	Js	128	——	34x5 S	36x5 D S
Mack AC Tractor	7-10	4950	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	R	128	——	34x5 S	36x5 D S
Mack AC Tractor	11-14	5500	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	R	128	——	34x6 S	36x6 D S
Mack AC Tractor	15	6000	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	Js	R	128	——	34x7 S	36x7 D S
Mack AP Tractor	15	9500	Own	6	5 x6	60.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	R	Js	1.7	——	34x7 S	36x7 D S
Mack AC 6-wheel	10	7500	Own	4	5 x6	40.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	4 R	Js	2-Opt.	——	36x7 S	40x12 S
Mack AP 6-wheel	10	12000	Own	6	5 x6	60.0	P&S	Str	Gra	R B	Own	J	4	Own	Ch.	Opt.	4 R	Js	2-Opt.	——	36x7	40x12 S
Moreland A-6	*6800	1275	Con 34 L	6	2⅞x4¾	19.84	Pb	Zen	Vac	Aut	Br-L 20	U	4	Tim 52000 H	Sp	24.17	4	D	134	3000	32x6.75	32x6.75
Moreland R R-6	*9300	1850	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	P	Aut	Br-L 35	U	4	Tim 54000 H	Sp	32.95	4	D	158½	4000	32x6	32x6
Moreland B-6	*12000	2200	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	P	Aut	Br-L 35	U	4	Tim 63721 H	Wo	34.8	4	D	158½	4500	34x7	34x7
Moreland E-6	*15000	3600	Her W X C	6	4 x4½	38.4	Pb	Zen	P	Aut	Br-L 51	U	4	Tim 65000 H	Wo	34.8	*4	D	182	6000	34x7	34x7 D
Moreland Ex. 6	*19000	3750	Her W X C	6	4 x4½	38.4	Pb	Zen	P	Aut	Br-L 51	U	5	Tim 65704 N	Wo	46.0	*4	D	182	6500	36x4 S	36x8 S
Moreland E D -6	*23000	4900	Her W X C	6	4 x4½	38.4	Pb	Zen	P	Aut	Br-L 51	U	5	Own	Wo	52.2	*4	D	196	8500	36x8	36x8
Moreland H-6	*22000	4650	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	P	Aut	Br-L 55	C	7	Tim 66702 W	Wo	82.3	*R	D	196	8000	36x5 S	36x10 S
Moreland H D S-6	*30000	5850	Her Y X C	6	4⅜x4¾	45.9	Pb	Zen	P	Aut	Br-L 60	C	7	Own	Wo	81.6	*4	D	220	10500	36x6 S	36x8
Moreland S D-6	*34000	6450	Her YXC 2	6	4½x4¾	48.6	Pb	Zen	P	Aut	Br-L 60	C	7	Own	Wo	89.0	*4	D	221	11500	36x7 S	36x10 S
Moreland T T-6	*34000	8000	Con 15 H	6	4½x5¾	48.6	Pw	Str	P	Aut	Br-L 70	C	7	Own	Wo	98.5	*4	D	221	12500	36x7 S	36x10 S
*Fleet Arrow F A-1	1½-2	2450	Own F A	6	3½x5	29.5	Pb	Str	A P	Rem	Own	U	3	Own	Sp	33.3	4	Tr	140	3950	32x6.00	34x7
*Pierce-Arrow F A-1	1½-2	2450	Own	6	3½x5	29.4	Pw	Str	P F	Del	Own	U	3	Tim	St	21.4	4	Tr	140	4100	32x6	32x6 D
*Pierce-Arrow X A-1	2	3500	Own	4	4 x5½	25.6	Pw	Str	Pre	Del	Own	C	4	Own	Wo	44.2	D	R	150	6750	36x4	36x5 D S
*Pierce-Arrow X B-1	3	3750	Own	4	4 x5½	25.6	Pw	Str	Pre	Del	Own	C	4	Own	Wo	48.1	D	R	150	6830	36x5	36x5 D S
*Pierce-Arrow H B-1	5	4500	Own	4	4 x5½	25.6	Pw	Str	Pre	Del	Own	C	7	Own	Wo	95.0	D	R	156	8400	36x5	36x6 D S
*†PierceArrow W C-1	4	5100	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	41.5	D	R	162	8780	36x5	36x6 D S
*†Pierce-Arrow R D-1	5	5400	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	40.5	D	R	162	9440	36x6	36x7 D S
*†Pierce-Arrow R F-1	7½	5600	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	51.9	D	R	168	10320	36x6	40x8 D S
†Pierce-Arrow R F-T	7½	5600	Own	4	4½x6¾	32.4	Pw	Str	Pre	Del	Own	C	4	Own	Wo	51.9	D	R	132	940	36x6	36x8 D S
Relay 20 B	1	1700	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	25.7	4	D	142	4100	B 30x5	B 30x5
Relay S 11 B	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	30.0	4	D	162	4500	B 30x5	D B 30x5
Relay 30 A	1½	2990	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	34.5	4	D	168	5300	B 34x5	D B 34x5
Relay 40 A	2	3240	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Own	Relay	34.5	4	D	168	5500	B 36x6	D B 36x6
Relay 50 C	2½	4415	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Own	Relay	58.5	4	D	175	7300	B 36x6	S 36x10
Relay 60 C	3	4480	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Own	Relay	58.5	4	D	175	7450	B 36x6	S 36x12
Relay 70 C	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Cov	C	8	Own	Relay	84.2	R	D	175	8600	B 36x6	S 40x12
Relay 80 C	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Cov	C	8	Own	Relay	84.2	R	D	175	8800	B 36x6	S 40x14
Reo B A	½	895	Con 16 E	6	3⅜x4	27.3	Pb	Sch	Vac	Rem	W-G	U	3	Sal	Sp	14.63	4	Tr	115	2290	28x5.25	28x5.25
Reo D A	1	995	Con 16 E	6	3⅜x4	27.3	Pb	Sch	Vac	Rem	W-G	U	3	Own	Sp	18.4	4	Tr	123	2755	30x5	30x5
Reo D C	1	1075	Con 16 E	6	3⅜x4	27.3	Pb	Sch	Vac	Rem	W-G	U	3	Own	Sp	18.4	4	Tr	138	2850	30x5	30x5
Reo F A	1½	1295	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	22.96	4	Tr	137	3525	32x6	32x6
Reo F E	1½	1395	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	22.96	4	Tr	152	3700	32x6	32x6
Reo F F	1½	1395	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	22.96	4	Tr	156	3750	32x6	32x6
Reo F H	2	1545	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	37.6	4	Tr	142	4165	32x6	32x6 D

Major Specifications and Mechanical Details of 1929 Commercial Cars Built in the United States

Make and Model	Capacity—tons	Chassis price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gearset	Location	No. Spds. for.	Rear Axle	Final Drive	Reduction In Low	Brakes, foot	Brakes, hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Reo F C	2	1595	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	37.62	4	Tr	152	4025	32x6	32x6 D
Reo F D	2	1695	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	37.62	4	Tr	168	4075	32x6	32x6 D
Reo G A	3	2035	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	41.05	4	Tr	163	4625	32x6	32x6 D
Reo G C	3	2140	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	41.05	4	Tr	179	4850	32x6	32x6 D
Reo G D	3	1985	Own	6	3⅜x5	27.3	Pb	Sch	Vac	Rem	Own	U	4	Own	Sp	46.2	4	Tr	134	4570	32x6	32x6 D
Republic Fleetmaster	*7000	1295	Lyc	6	3¼x4½		Pb	Zen	Vac	Aut	Br-L	U	4	Cla	Sp	28.3	4	Tr	144	3300	6.00x20 B	32x6
Republic F-1	*12000	2195	Lyc	6	3¼x4½		Pb	Zen	Vac	Aut	Ful	U	4	Eat	Sp	43	4	D	155	4850	32x6	32x6 D
Republic H-1	*15000	2985	Lyc	6	3⅞x5		Pb	Zen	Vac	Aut	Ful	U	4	Eat	Sp	36	4	D	163	5750	34x7	34x7 D
Republic L-1	*18000	3595	Lyc	6	3⅞x5		Pb	Zen	Vac	Aut	Ful	U	4	Eat	D R	48.0	4	D	180	6900	36x8	36x8 D
Republic M-1	*20000	3800	Waukesha	6	4 x4¾		Pb	Zen	Vac	Aut	Br-L	U	5	Eat	D R	53	D	R	171	6900	36x8	36x8 D
Rugby Model 401	1	*775	Con	4	3⅜x4¼	18.2	Pb	Til	Vac	Aut	Own	C	3	Own	Sp	14.79	4	4	107	2325f	28x4.75	28x4.75
Selden 7	¾–1	1098	Con 29 L	6	2⅞x4¾	19.8	Pb	Zen	Vac	Aut	Br-L	U	3	Tim	Sp	23.2	4	D	124	3100	30x5	30x5
Selden 17C	1–1½	1430	Con 18 E	6	3⅜x4	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	31.0	4	D	142	3750	30x5	30x5
Selden 37C	2–2½	1950	Con 15 C	6	3⅜x4⅝	27.3	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	31.0	4	D	151	4600	30x5	30x5 D
Selden 39C	2½–3	2398	Con 16 R	6	4 x4½	38.4	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	33.0	4	D	164	5800	32x6	32x6 D
Selden 47 CD	3½–4	3900	Con 18 R	6	4 x4½	38.4	Pb	Str	Vac	Aut	Br-L	U	4	Wis	D R	41.7	4	D	164	6900	34x7	34x7 D
Selden 67C	4– 5	4950	Con 21 R	6	4⅜x4¾	45.9	Pb	Str	Vac	Aut	Br-L	C	7	Wis	D R	95.7	4	D	164	9000	36x8	36x8 D
Selden 77B	5–7	——	Con 16 H	6	4⅜x5¾	54.1	Pb	Str	Vac	Aut	Br-L	C	7	Wis	D R	95.7	R	D	171	10000	36x8	S 36x12
Selden 47CB	3–3½	3700	Con 18 R	6	4 x4½	38.4	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	36.5	4	D	164	6700	34x7	34x7 D
Service 20 Y	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	B 30x5	B 30x5
Service S 11 Y	1½	1990	Bud H S 6	6	3⅜x4½	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	B 30x5	D B 30x5
Service 40 Z	2	3240	Bud D S 6	6	3⅝x5	31.2	Pw	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	B 36x6	D B 36x6
Service 60 Z	3	4480	Bud B U S	6	4 x5⅛	38.4	Pw	Zen	Vac	Aut	Br-L	U	5	Tim	Wo	63.0	4	D	175	7100	S 36x5	S 36x12
Service 80 Z	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pw	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	R	D	175	8400	S 36x6	S 36x14
Standard 2½ K	2⅛-3⅛	3200	Con K 4	4	4⅛x5¼	27.2	Pb	Str	Vac	Aut	Br-L 35	C	4	Tim 65600	Sp Wo	34.8	R	D	147	5400	36x5 S	36x8 S
Standard 3½ K	3½–5	4350	Con L 4	4	4½x5½	32.4	Pb	Str	Vac	Aut	Br-L 55	C	7	Tim 66700	Sp Wo	83.0	R	D	160	7485	36x5 S	36x12 S
Standard 5 K	5–7	5250	Con B 5	4	4¾x6	36.1	Pb	Str	Vac	Aut	Br-L 60	C	7	Tim 68700	Sp Wo	83.6	R	D	164	8700	36x6 S	40x14 S
*Stewart Buddy 21	¾	890	Lyc W S G	6	2⅞x4¾	19.8	Pb	Str	Gra	Rem	W-G	U	3	Sal	Sp	30.0	4	D	118	2694	30x5.50	30x5.50
*Stewart Buddy 21 X	1	995	Lyc W S G	6	2⅞x4¾	19.8	Pb	Str	Vac	Rem	W-G	U	3	Sal	Sp	30.0	4	D	128	2806	30x5	30x5
*Stewart 16	1¼	1295	Lyc C T	4	3¾x5	22.5	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	24.0	4	D	130	3326	32x6	32x6
*Stewart 16 X	1¼	1295	Lyc 4 S L	6	3¼x4½	25.3	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	24.0	4	D	130	3326	32x6	32x6
Stewart 26 X W	2	2290	Lyc T	6	3⅝x5	31.5	Pw	Str	Vac	Rem	Ful	U	4	Tim	Wo	29.0	4	D	165	5095	32x6	32x6 D
*Stewart 18 X	2½	2690	Lyc T	6	3⅝x5	31.5	Pw	Str	Vac	Rem	Ful	U	4	Tim	Wo	29.0	4	D	165	5788	32x6	32x6 D
Stewart 19 X	3½	3690	Lyc F	6	3⅞x5	36.2	Pw	Str	Vac	Rem	Ful	C	12	Tim	Wo	105.1	4	D	165	6990	36x5	36x10
*Stewart 22 X	4	4200	Lyc F	6	3⅞x5	36.2	Pw	Str	Vac	Rem	Ful	U	12	Tim	Wo	34.8	4	D	165	7990	36x5	36x12
Stewart 28 X	1½	1495	Lyc 4 S L	6	3¼x4½	25.3	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	27.3	4	D	136	3840	30x5	30x5 D
Stewart 29 X	2	1695	Lyc 4 S L	6	3¼x4½	25.3	Pb	Str	Vac	Rem	Ful	U	4	Cla	Sp	27.3	4	D	145	4188	32x6	32x6 D
Stewart 27 X	5–7	5700	Waukesha	6	4⅝x5⅛	45.99	Pw	Str	Vac	Rem	Ful	U	8	Tim	Wo	93.81	4	D	165	9700	36x7	40x7 D
Studebaker GN-P	¾	845	Own	6	3⅜x4⅛	27.3	P C	Str	P	Rem	Own	U	3	Own	Sp	14.3	4	4	115	——	19x6.00	19x6.00
Studebaker GN-S	1	1045	Own	6	3⅜x4⅛	27.3	P C	Str	P	Rem	Own	U	3	Own	Sp	13.8	4	Js	130	——	20x6.00	30x5
Studebaker GK-N	1	1095	Own	6	3⅜x4⅜	27.3	P C	Str	P	Rem	Own	U	3	Own	Sp	13.7	4	Js	146	2830	30x5	30x5
Studebaker GN-N	1¼	1245	Own	6	3⅜x4⅛	27.3	P C	Str	P	Rem	Clark	U	4	Clark	Sp	33.5	4	Js	146	——	30x5	32x6
Studebaker 77	2½	2285	Own	8	3½x4⅜	39.2	P C	Str	P	Rem	Ful	U	3	Eat	Sp	19.8	4	Js	158	4745	20x6.75 B	20x6.75 B
Studebaker 88	3	2985	Own	8	3½x4⅜	39.2	P C	Str	P	Rem	Ful	U	3	Eat	Sp	19.8	4	Js	184	4920	20x7.50 B	20x7.50
Studebaker 99	3½	3485	Own	8	3½x4⅜	39.2	P C	Str	P	Rem	Ful	U	4	Eat	Dr	24.6	4	Js	184	5400	20x7.50 B	20x7.50
Victor 35	1½	1895	Con	6	3⅜x4	27.3	Pb	Zen	Vac	Rem	Cov	U	3	Tim	Sp	—	4	D	144	3200	30x5	30x5 D
Victor 45	2½	2495	Her	6	3¾x4½	33.7	Pb	Zen	Vac	Rem	Ful	U	4	Wis	D R	—	4	D	148	4500	32x6	32x6 D
Victor 75	3½	3895	Her	6	4 x4½	38.4	Pb	Zen	Vac	Rem	Ful	U	4	Wis	D R	—	4	D	162	6000	34x7	34x7 D
Whippet 96 A	½	380	Own 96 A	4	3⅛x4¾	15.6	Pb	Til	Vac	Aut	Own	U	3	Own	Sp	14.75	4	R	103¼	1659	28x4.75	28x4.75
Whippet 6 C-101	1½	645	Own 98 A	6	3¼x3⅞	23.4	Pb	Til	Vac	Aut	Ful	U	4	Cla-B 364	Sp	33.5	4	R	131	2540	30x5	30x5
†White 15 B	1	1545	Own G K A	4	3¾x5⅛	22.5	C S	Zen	Vac	L-N	Own	C	4	Own	Sp	18.6	R	R	133½	3242	30x5	30x5
†White 57	1¼	2725	Own G R C	4	4 x5¾	25.6	Pw	Zen	Vac	L-N	Own	U	4	Own	Sp	19.3	R	R	146	3755	32x6	32x6
†White 20 A	1½	2125	Own G K A	4	3¾x5⅛	22.5	C S	Zen	Vac	L-N	Own	C	4	Own	D R	32.1	R	R	145½	4412	34x5	34x5 D P
†White 56	2	3125	Own G R C	4	4 x5¾	25.6	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	26.2	R	D	165	5096	36x4 S	36x7 S
†White 51 A	2½	3750	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	35.5	R	D	170	6256	36x5 S	36x8 S
†White 55	3½	4650	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	I G	66.1	D	R	174	8402	36x5 S	40x5 S D
†White 52 T	3½	4700	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	I G	76.5	D	R	129½	8126	36x5 S	40x5 S D
†White 52	5	5100	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	5	Own	I G	92.3	D	R	174	9184	36x6 S	40x12 S
†*White 58	3	4400	Own G R B	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	I G	49.5	D	A	180	7400	36x5 S	36x5 S D
†White 60	1	1850	Own 2 A	6	3½x4½	29.4	Pw	Zen	Vac	Rem	Own	U	3	Own	Sp	17.9	4	D	138	3562	30x5	30x5
†White 61	1½	2450	Own 2 A	6	3½x4½	29.4	Pw	Zen	Vac	Rem	Own	U	4	Own	Sp	23.4	4	D	148	4612	30x5	30x5 D
Willys-Knight 15	1½	1545	Own K G T	6	2⅞x4⅜	20.7	Pb	Til	Vac	Aut	Ful D U	U	3	Eat 1002	Sp	24.3	4	R	134	3300	30x5	32x6
Willys-Knight 16	1½	1595	Own K G T	6	2⅞x4⅜	20.7	Pb	Til	Vac	Aut	Ful D U	U	3	Eat 1002	Sp	24.3	4	R	151	3400	30x5	32x6
Willys-Knight 20	2	1945	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful D U	U	3	Eat 1504	Sp	28.4	4	R	150	3800	32x6	34x7
Willys-Knight 21	2	1995	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful D U	U	3	Eat 1504	Sp	28.4	4	R	164	3900	32x6	34x7
Willys-Knight 25	2½	2545	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful G U	U	4	Wis 6617 B	D R	30.3	4	R	150	4920	32x6	32x6 D
Willys-Knight 26	2½	2595	Own K G T	6	3⅜x4¾	27.3	Pw	Til	Vac	Aut	Ful G U	U	4	Wis 6617 B	D R	30.3	4	R	164	5020	32x6	32x6 D

GENERAL NOTATIONS

†REFERENCE MARKS apply to individual lines only and explanations are given under the subdivision for each company in the **"SPECIAL NOTATIONS."**

CAPACITIES given in this table are in tons of fractions of tons. *Shows maximum allowable gross weight.

TIRE EQUIPMENT where not otherwise indicated is solid.

WHEEL BASES given are standard, but optional wheel bases are available in many cases.

ENGINE—Bud, Buda; Con, Continental; Her, Hercules; Kgt, Knight; Lyc, Lycoming; Wak, Waukesha; Wis, Wisconsin.

LUBRICATION—Pb, pressure lubrication to main and connecting rod bearings; Pw, full pressure lubrication to all bearings, including wrist-pins; P&S, pressure with splash; CS, circulating splash; Sp, Splash.

CARBURETOR—Car, Carter; Hol, Holley; Joh, Johnson; Mar, Marvel; Sch, Wheeler-Schebler; Str, Stromberg; Stw, Detroit lubricator; Til, Tillotson; Zen, Zenith-Detroit.

FUEL FEED—Gra, Gravity; Pre, Pressure; Vac, Vacuum tank; P, Fuel pump, Auto-P, Auto pulse; E, Electric pump.

IGNITION — AB, American-Bosch; Aut, Electric Auto-Lite; Apo, Apollo; Del, Dayton Engine Laboratory; Eis, Eisemann; L-N, Leece-Neville; N-E, North East; RB, Robert Bosch; Rem, Delco-Remy; Spf, Splitdorf.

TRANSMISSION—Br L, Brown-Lipe; Cov, Covert; Ful, Fuller; Mec, Mechanics Machine; Mun, Muncie; W-G Warner Gear.

LOCATION—C, Center, Amid; U, in unit with engine; J, Jackshaft.

REAR AXLE—Cla, Clark Equipment; Col, Columbia; Eat, Eaton; Sal, Salisbury; Tim, Timken; Wis, Wisconsin.

FINAL DRIVE—St, Straight bevel; Sp, Spiral bevel; Wo, Worm; DR Double Reduction; Ch, Chain; IG, Internal Gear.

BRAKES—Js, Jackshaft; R, Rear wheels; D, Drive shaft; 4 Four-wheel; Tr, Transmission; W, Westinghouse air brake.

TIRES—B, Balloon; D, Dual; S, Solid.

SPECIAL NOTATIONS

AMERICAN-LA FRANCE

*Chief model also available as 2½-ton model, 24x7 tire, dual rear, weight 6,400. Price $3,900.

AUTOCAR

†Engines in these models are located under the driver's seat.

DURANT LINE

*Price includes panel body.

GENERAL MOTORS TRUCK LINE

*Capacity given in all cases is maximum allowable total gross weight (straight rating), and includes chassis, cab, equipment, body and load.

Model T-19 is also available in three other types, with 145¾-inch wheel base having same straight ratings and standard tire combinations as listed for the 127¾-inch wheel base types shown in the table.

Model T-30 is also available in six other types, with 152 and 164 inch wheel bases, respectively, having same straight ratings and standard tire combinations as listed for the 136-inch wheel base types shown in the table.

Model T-42 is also available in nine other types, with 152, 164 and 175 inch wheel bases, respectively, having same straight ratings and standard tire combinations as listed for the 136-inch wheel base types shown in the table.

Model T-60 is also available in nine other types with 160, 180 and 200 inch wheel bases respectively, having same straight ratings and standard tire combinations as listed for the 140-inch wheel base types shown in the table.

Model T-60 Special is also available in six other types with 160¾, 180¾ and 200¾ inch wheel bases, respectively, having same straight ratings and standard tire combinations as listed for the 140¾-inch wheel base types shown in the table.

Optional rear axle gear ratios are available for all types and optional tire equipment is available for all types except Model T-11-1001.

FLEET-ARROW LINE

*Model F. A. 1 is also available as Model F. A. 2, at $2,500 on wheel base of 160 inches, weight 3,975 lbs., and as Model F. A. 3, at $2,550, with seven speed transmission, on 180-inch wheelbase, weight, 3,985 lbs.

GRAMM

*Models B, C, D and E are furnished in three wheel base lengths—others on request.

*Model T Series—Larger engines, pneumatic tires and special wheel bases, and 8 speed transmissions—optional at extra cost.

Model "GY"—190 and 210 in. wheel bases.
Model "HY"—210 and 236 in. wheel bases.

*Model "HY"—210 and 236 in. wheel bases. Tire sizes and electrical equipment optional, depending upon type of service—Coach or Van.

*Above models are all built in tractor wheel base lengths for semi-trailer use.

HAHN LINE

*Model 22 also available as Model 26, priced $1,495, on 144-inch wheel base, with Buda H. S. engine, 6-cyl. 3⅝x4⅛ inches rated 27.3 h.p., weight 3,200 lbs.

*Model 34 also available as Model 36, with Buda H. S. 6 engine (described above), weight 3,850 lbs.

*Model 44 also available as Model 46, priced $2,410, on 156-inch wheel base, with Buda H. S. 6 engine, as in Model 26, weight 4,200 lbs.

*Model 56 also available on 171-inch wheel base.

INTERNATIONAL HARVESTER LINE

*Model HS-54 also available in the following wheel bases, 130-inch tractor, 170, 185 and 200-inch.

*Model HS-54-C also available in the following wheel bases, 130-inch tractor, 170, 185 and 200-inch.

†Frame is reinforced with inserted channels in each side rail, extending from dash to rear end.

*Model HS-74 also available in the following wheel bases, 144-inch tractor, 185, 210 and 235-inch.

*Models HS-74-C and HS-104-C also available in the following wheel bases, 144-inch tractor, 185, 210 and 235-inch.

All Model HS heavy-duty International truck models are equipped with built-in vibration dampered clutches.

LARRABEE

*Note—Bevel gear, worm or double reduction drive rear axle available in models 40 and 50. Bevel or dbuble reduction axles available in 30. Worm axles in 60, 70 and 80. Three or more wheel bases in each model. All Larrabee models have hydraulic brakes: 40 up have vacuum booster.

MACK LINE

Other wheelbases furnished on all truck models.

On 6-wheel jobs, 4 rear wheels driven by chains, foot brake on 4 rear wheels.

Hyp.—Hypoid drive, single reduction.

PIERCE-ARROW LINE

*Model FA1 also available as Model FA2, at $2,550 on 160-inch wheel base, weight 4,150 lbs., and also as Model FA3, at $2,250 on 180-inch wheel base, weight 4,200 lbs.

*Model XA1 also available as Model XA2, at $3,550 on 162-inch wheel base, weight 6,500 lbs.

*Model XB1 is also available as Model XB2, at $3,800 on 180-inch wheel base, weight 6,900 lbs.

*Model HB1 is also available as Model HB2, at $4,550 on 180-inch wheel base, weight 8,500 lbs., and also as Model HB3, at $4,600 on 198-inch wheel base, weight 8,700 lbs.

*Model WC1 is also available as Model WC2, at $5,150 on 180-inch wheel base, weight 8,950 lbs., and also as Model WC3, at $5,250 on 198-inch wheel base, weight 9,050 lbs.

*Model RD1 is also available as Model RD2, at $5,450 on 180-inch wheel base, weight 9,650 lbs., and also as Model RD3, at $5,500 on 198-inch wheel base, weight 9,750 lbs.

*Model RF1 is also available as Model RF2, at $5,650 on 204-inch wheel base, weight 10,500 lbs.

†Seven-speed transmission also available.

REPUBLIC LINE

*Model 75-4 also available as Model 75-6, priced $1,495, on 128-inch wheel base, with Lycoming 4SL engine, 6-cyl. 3¼ by 4½ inches, rated 25.3 h.p., weight 3,150 lbs.

*Model 76-4, also available as Model 76-6, priced $1,675, on 150-inch wheel base, with Lycoming 4SL engine, as in Model 75-6, weight 3,500 lbs.

†Model 60-61, also available with four-wheel brakes, $3,155.

**Model 62, same as 60-61, on 171-inch wheel base, $3,040.

†Model 25W-25WRB available with four wheel brakes.

**Model 66, same as 65, on 200-inch wheel base, $3,750.

**Model 25W, 25WB and 25WBR also available in 3½-ton capacities as Models S25W, S25WB and S25WRB on wheel bases of 165, 156 and 124 inches, priced $3,695.

**Models 35 and 35B also available in 5-ton capacities on wheel bases of 170 and 157 inches, priced $5,145.

**Model 85 also available as Model 86 on 170-inch wheel base, price $2,150.

**Model 50-51 also available as Model 51 on 170-inch wheel base.

REO LINE

*Tonner in wheel base, 123, 138; 1½-ton in wheel base, 137, 156, 152; 2-ton in wheel base, 152, 168; 3-ton in wheel base, 168 179, 184.

RUGBY

F—Chassis weight includes body.

STEWART LINE

*Buddy 1-ton can be supplied in 138-inch wheel base.

*Models 16 and 16X can be supplied in 145-inch and 160-inch wheel base.

Model 26X can be supplied in 146, 160 and 176 inch wheel base.

Model 29X can be supplied in 160 and 176 inch wheel base.

*Model 26XW can be supplied in 148, 176 and 190 inch wheel base.

*Model 18X can be supplied in 148, 190 and 220 inch wheel base.

*Models 19X and 22X can be supplied in 148, 172, 190, 220 and 235 inch wheel base.

WHITE LINE

*Bus Model 52 is equipped with Booster Brakes and 50B and 54 with air brakes. Model 58 with air brakes as optional equipment.

Model 60 gross weight capacity, with 32x6 tires, 8,000 lbs.; 34x7.50 balloon tires optional at extra cost.

†Supplied in optional wheel bases.

FORD LINE

*Low speed axle 22.6 to 1.

News of Activities in the Truck and Bus Field

Cumulative New Commercial Car Registration Table, August, 1929

Returns for today: Idaho and Missouri.

Some of this data has been published previously, but it is given here complete for the convenience of our subscribers. Commercial Car Registrations do not include buses.

States	Autocar	Brockway-Indiana	Chevrolet	Diamond-T	Dodge	Dover	Fargo	Federal	Ford	G. M. C.	International	Mack	Pierce-Arrow	Relay	Reo	Republic	Rugby	Sterling	Stewart	Studebaker	Whippet	White	Willys-Knight	Miscellaneous	Totals	States
Arkansas			560		20		1	1	480	5	68	1			4				1		11	6		5	1164	Arkansas
Delaware			39	1	1				65	4	5	1			2		1		1		2				122	Delaware
Florida		6	165		14				321	16	10	1			7					2	2	8			552	Florida
Idaho			215		22		2		237	12	43				8		11			1	5	3	1	4	564	Idaho
Illinois	6	9	718	62	92		15	6	1073	46	140	16			33	1		9	2		40	19		106	2393	Illinois
Maryland	20	13	184	9	39	4	6	4	296	31	42	17			20	2	2	2	10	3	4	16		16	740	Maryland
Minnesota			421	2	38	1	12	7	555	22	123	9			27		1			1	28	9	4	23	1283	Minn.
Missouri	6	5	527	23	62		6	8	817	39	97	14		1	20	4	5	6	1	7	41	6		13	1708	Missouri
Montana			222		28		14	8	299	9	91	4			16		3			1	11	3	1	1	711	Montana
N. Hamp.	2	2	52		11	2		3	84	6		1			6			1					1	172	N. Hamp.
New Jersey	25	30	426	18	112		18	13	692	57	39	41	1	4	42		1	18	9	11	13	43	5	77	1695	N. Jersey
No. Carolina		1	312		30		1	1	304	5	22	15			6	1					6	4		4	712	Nor. Car.
North Dak.			142	1	8		3		182	11	77				2					3	8		1		438	Nor. Dak.
Oregon			186		29		3	8	274	12	20	16			20	3	8	6			5	15		10	615	Oregon
Rh. Island	1	2	61		23		4		86	18	3	5			14		4	4	1	1	2	4		5	238	Rhode Isl.
So. Carolina			193		7		1	1	220	10	7	1				2			1		3	2			448	S. Car.
South Dak.		1	317		10				218		124			18		1		1	1	23				5	719	So. Dak.
Utah			68		11		2		155	2	3				5		5				4			1	256	Utah
Virginia	2	6	323	1	15			5	368	10	39	5	2	1	12	9	1		4	6	7	12		1	827	Virginia
W. Virginia		9	200	5	25		2	6	232	16	36			2	9	3				2	11	1		1	560	West Va.
Wisconsin		1	342	15	52		9	3	503	20	69	3		4	42		1	13	5	5	22	2		17	1128	Wisconsin
Wyoming			49		14		4		67	3	14	2			5		2			1	1	2			164	Wyoming
Dist. of Col.	3	3	24		2			1	83	13	6	2			2				2		2	5		8	156	D. of Col.

Declares Trucks Change Modern Styles and Diets

Detroit, Sept. 26.—"From a motor truck speeding along a country road to the food and dress of the average person is a long step, but trucks are playing a big part in the changing diet, styles and mode of living of the average American family," according to Harry A. Kaufmann, general sales manager of the Fargo Motor Corporation, manufacturer of Fargo trucks and commercial cars.

"From government surveys we learn that there is an increasing demand for vegetables and fruits being consumed by the American people," Kaufmann says, "and milk drinking is considerably on the increase. Undoubtedly one of the important reasons for this is the wider distribution of these foodstuffs, made possible through the speedy service of modern trucking. It has now reached the point where the producer and consumer are neighbors, regardless of distance.

"The motor truck has solved the distribution of produce in less than car load lots, in the smaller localities. City jobbers are finding a fertile field for more business in the suburban localities, and the farmers are enjoying an economical and dependable access to city markets in the ownership of motor trucks.

"Styles, too, are influenced in all sections of the country as a result of the motor truck. Merchants can keep smaller stocks because of the fact that it is possible for them to get immediate deliveries of new merchandise. Rapid stock turn-over is insuring latest style at lower prices. The consumer now benefits because the jobber and the retailer are linked by motor truck.

"Modern laundries and cleaning establishments have built up amazingly large fleets of commercial cars which travel within a radius of as high as forty miles from the home office.

"The immediate future will undoubtedly see an extension of nearly every city convenience to the rural districts by means of motor transport."

MARMON MAKES FAST CROSS-COUNTRY RUN

Boston, Sept. 26.—After a cross-country dash from Berkeley, Cal., to Cambridge in a Marmon car in a driving time of 79 hours, Correy C. Brayton, Jr., 19, went on to Montreal.

From Omaha to Boston was a non-stop, except for refueling. He only stopped once to sleep—at Omaha. Expenses were $97, including gas and oil for the Marmon roadster, food and incidentals. Total mileage was 3,680, making the trip cost 2.6 cents per mile.

BLUE COACH PROPERTY NOW BEING TRANSFERRED

Frankfort, Ky., Sept. 26.—The transfer of the property of the Blue Coach Lines to the Consolidated Coach Corporation is being gradually made so that there will be no interruption of business. The Consolidated Coach Corporation now has its lines extending from Canada to Florida, with numerous connecting lines. F. W. Dempsey, general manager of the Blue Coach Lines, is retained in the same capacity with the Consolidated Coach Corporation, with headquarters in Cincinnati, O., and Covington, Ky. W. T. Dudgeon of Walton has been appointed secretary of the Dixie Traction Company, running from Erlanger to Covington and Cincinnati.

The Blue Coach Lines will retain their uses running from Carrollton to Cincinnati, and from Covington to Marysville, Ky., and this line will be extended to Huntington, W. as soon as the state highway is com- Va., as soon as the state highway is completed to the tri-state region of Kentucky.

mately $2,000,000 worth of cars to

I. H. C. OPENS NEW BRANCH HOME AT CHARLOTTE, N. C.

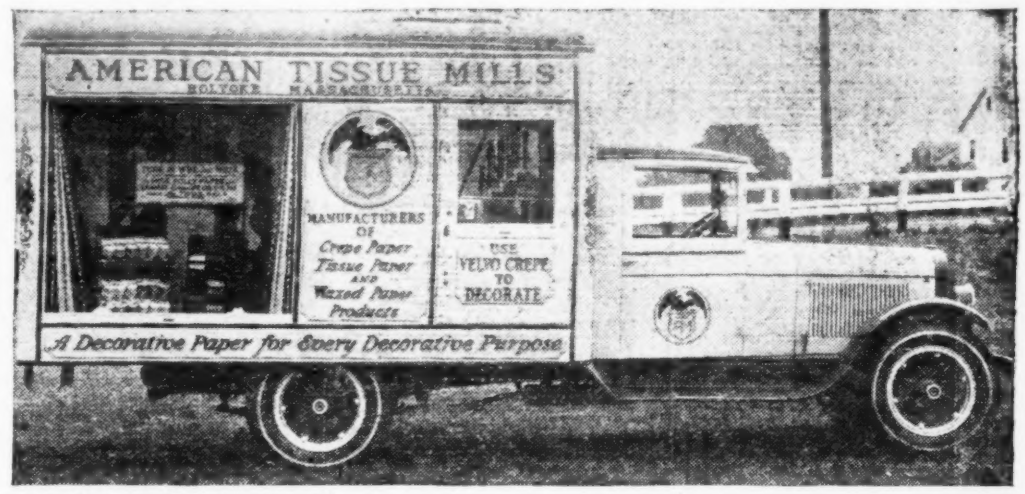
Charlotte, N. C., Sept. 26 (U. T. P. S.).—The new home of the International Harvester trucks was opened last week at 1200 West Morehead St.

Preceding the formal opening of the new building, there was a joint meeting of local dealers and dealers from the adjacent territory. These International truck dealers were the guests of E. L. Bush and J. E. Sheeler, branch manager and assistant branch manager of the farm implement division of the company, respectively, and W. S. Scruggs, who is manager of the Charlotte branch of the Internationl Harvester Truck Company. Approximately sixty dealers from the entire state and hundreds of visitors participated in the opening of the new home of the concern.

OPENS NEW BUS LINE

Oil City, Pa., Sept. 26.—The Citizens Transit Company, operating local and interurban bus service in this city, has received a certificate for operation of a route between Oil City and Franklin, Pa., a one-way distance of seventeen miles. The company has purchased several A. C. F. buses for use on the new line, which will be operated over a new highway, via Reno, Pa.

Reo Speedwagon Dons Novel Garb



HAZELL MADE MANAGER FOR MACK IN MONTREAL

Montreal, Sept. 26.—It is announced that R. T. Hazell has been appointed Montreal branch manager for Mack Trucks of Canada.

Hazell has been connected with the Mack Company for five years, and his many friends in the industry will be pleased to hear of his well-earned promotion.

MEMPHIS FEDERAL TRUCK PROMOTES STEPHENSON

Memphis, Tenn., Sept. 26.—W. C. Stephenson has become manager of the used car department of the Federal Truck Company at 888 Linden Ave. He has been active in the used car field in Memphis several years.

Holyoke, Mass., Sept. 26.—A Reo Speedwagon, with a special body mounted on a one and one-half ton chassis, owned and operated by the American Tissue Mills of Holyoke, Mass., is something new both in trucks and the field of merchandising.

The body is white, with all the lettering in raised letters painted red, and the truck is being used in a practical advertising exhibit which can be moved about according to business demands. The idea of the corporation was that this movable show-window would demonstrate how the products of the American Tissue Mills could be used in making attractive window displays.

There is a caliope mounted in the truck and a voice-amplifying system which permits the announcer to talk to a large group around the truck.

WISCONSIN AXLES

Wisconsin superiority has been demonstrated for more than ten years; it can be demonstrated on any test. Built for trucks from 1½ tons to 7 tons, for busses and 6 wheelers.

WISCONSIN AXLE CO. Oshkosh, Wis.

CLARK

Now SEE Them

exhibited at the Electric Railway Association Convention (Space 332) in Atlantic City September 28 to October 4—

CLARK AXLES and METAL WHEELS

For MOTOR BUSES and TRUCKS

CLARK EQUIPMENT COMPANY

Buchanan Michigan

AXLES Front & Rear WHEELS Single or Dual Tire CAST STEEL HOUSINGS TRANSMISSIONS

Constant Effort, Not Special Drives, Moves Used Cars, Says Atlanta Dealer

Careful Appraisals Insure Profits When Reselling

By J. H. REED

ATLANTA, Ga., Sept. 26. (U. T. P. S.).—Expert appraisal of cars taken in, intelligent use of the General Motors control system, a policy of absolute frankness and honesty in dealing with customers, and the utilization of every possible sales source—these are some of the things which make the used car department of the John Smith Company of Atlanta successful.

These are just a few of the many things done by the department in moving the cars that have been traded in for new ones.

"There are two things," says Mr. Williams, head of the used car department, "upon which success absolutely depends. One is not to allow too much for a used car. The other is to be perfectly honest with your prospective customers. Neglect these two points, and, no matter how many 'tricks of the trade' you may use, your department will not long remain successful.

"We do not care how old a car may be, or how many times it has been traded in, if we can buy it at the right price. And, once a car is on the floor, we never try to make it out more perfect than it is.

"The customer knows better. And we would only be losing confidence.

"We tell him the condition the car was in when it came into the shop—how long it had been driven, and what had to be done to recondition it. In short, we lay our cards on the table, and the prospect can take the car if he believes that it is worth the money. People will trade only where such a policy of absolute honesty is maintained."

While many of the salesmen in the used-car department are old hands at the business, and a few have actually been appraisers, all appraising in the John Smith Company is done by one man—Mr. Williams.

Every man looks at a car in a different way, and no two appraise just alike—hence the necessity for one-man appraisal.

Incidentally, in order to check the over-enthusiasm of younger salesmen, ready to offer anything for a used car in order to secure a commission, the firm for a time used the method of paying on a basis of net profit rather than gross sales. But the system was eventually dropped.

"For," says Mr. Williams, "if a salesman hasn't the real interest of the firm at heart, we do not want him."

The control system used gives every possible fact about the used cars taken in—who turned them in, what allowance was made for them, what it is estimated the cost of reconditioning will be, what reconditioning actually cost, when they went on the sales floor—and when the were sold.

Salesmen are encouraged to sell new cars by being offered bonus commissions on cars sold without a trade-in.

More than eighty per cent. of the cars sold have an old car accepted as a trade-in—which means that the used car department must maintain just as large and efficient a staff as the new car department. In fact, a more efficient department.

"As long as a used car remains on the floor," says Mr. Williams, "it is costing us around $25 a month in rental of the space occupied, oil, gas, battery repairs and one thing and another. Hence you can see the importance of moving the used cars out as fast as they come in.

"Our control system shows how long each car has been on the floor, and at the end of ninety days, if a car has not been sold, it becomes the 'order of the day,' as it were.

"Some cars are of such good appearance and in such good condition that they do not remain on the floor more than a day or two. Others linger for four or five months—we never know exactly why. But the rule is to push the cars that are nearing the 90-day mark."

No special sales are held by the company, which believes that they destroy confidence. Nor are any special "drives" made to sell used cars. They must be sold steadily, just as new cars are steadily sold.

"Almost everyone," says Mr. Williams, "is a prospect for a used car. With the well-to-do, there is an increasing demand for a second car—often a used one—for the use of the family.

"Take the man who has several children going to school in different parts of the city. By the time he has taken them there in the morning and brought them home in the afternoon, he has lost anywhere from $50 to $200 a month from his business. In most instances this is enough for the purchase of a used car for the children to use for themselves.

"There are many middle-class families who do not feel that they can afford a new car, yet who could easily afford a moderately priced used one.

The farmer, at present, offers the best field for disposing of lower priced used cars. Every week we advertise a few cars in papers which will reach the farm trade. We run these ads on Wednesday, Thursday and Friday—just small classified ads—and we always have some farmers in to look at them when they come to town on Saturday.

"These men are reliable, we have found, and we have little trouble in making collections on the cars sold."

The sales force at the John Smith Company rotates, each salesman taking his turn on the floor, while the others are out in the city.

If a customer comes in and calls for some salesman, the sale belongs to him, no matter who closed it from the floor. But if a salesman cannot so make an impression as to be called for by name, that sale belongs to the floor man.

At any rate, the system followed is one that moves used cars steadily for the John Smith Company—and, what is more, moves them at a profit.

Tendency of States to Standardize License Plates

(Continued from Page 1)

of Missouri and Oregon, which have not yet selected new colors:—

STAE	COLOR SCHEME
Alabama	White on Red
Arizona	Black on Light Gray
Arkansas	Gold on Bright Blue
California	Black on Orange
Colorado	Deep Yellow on Black
Connecticut	White on Blue
Delaware	Gold on Blue
Dist of Col.	Black on Chrome Yellow
Florida	White on Dark Green
Georgia	Black on Gray
Idaho	Black on Orange
Illinois	White on Black
Indiana	Yellow on Blue
Iowa	White on Dark Blue
Kansas	White on Black
Kentucky	Red on Yellow
Louisiana	Yellow on Green
Maine	White on Red
Maryland	White on Green
Massachusetts	White on Red
Michigan	Black on Yellow
Minnesota	Black on Aluminum
Mississippi	Red on Blue
Montana	Black on Orange
Nebraska	Cream on Cobalt Blue
Nevada	Orange on Black
New Hampshire	White on Dk. Green
New Jersey	White on Gray
New Mexico	Gold on Black
New York	Yellow on Black
No. Carolina	White on Maroon
North Dakota	Green on Orange
Ohio	White on Maroon
Oklahoma	Black on Yellow
Pennsylvania	Blue on Gold
Rhode Island	White on Black
South Carolina	White on Black
South Dakota	Black on Yellow
Tennessee	Blue on Silver
Texas	Blue on Yellow
Utah	White on Black
Vermont	Maroon on Old Gold
Virginia	Orange on Black
Washington	Green on White
West Virginia	Black on Gray
Wisconsin	Black on Gray
Wyoming	White on Black

AUTOMOBILES IN ICELAND INCREASED 100% IN 1928

Washington, Sept. 26.—The pony is being rapidly replaced by American automobiles in Iceland as a means of transportation, according to a report to the Department of Commerce from Copenhagen. Last year the number of automobiles in operation in Iceland was increased nearly 100 per cent., the total number being 310 passenger cars and 492 trucks, while during the first half of this year it is estimated that 325 motor vehicles, of which a large proportion were trucks, have been imported in Iceland.

Fokker Demonstrates New Large Airplane

Washington, Sept. 26.—There has just been concluded a three-day demonstration to official Washington of the Fokker F-32, the largest plane that has been built in America.

In three days it has carried 1,000 passengers from official circles—dignitaries of the War Department, Navy Department, Department of Commerce, Marine Corps, Coastal Guard Service and Internal Revenue Office. Among those who flew were Trubee Davison, assistant secretary of war in charge of aviation; Admiral William E. Moffatt, Gen. Fechet and Commander Towers.

Since the F-32 will fly on any two of its four engines, there is a great gain in safety and automatic stability. The installation of four engines not only gives a greater factor of safety in flight, but also gives an economic advantage, inasmuch as the pay load capacity is increased three times with only one-third increase in horse power.

Already orders for more than a million dollars' worth of F-32 transport ships have been received, and additional orders are anticipated as a result of the Washington visit. The first five F-32's have been ordered by the Universal Aviation Corporation for their train-plane transcontinental service. Six more have been ordered by Western Air Express for use between San Francisco, Los Angeles and Kansas City.

Fokker now has plants at Passaic, N. J., and Wheeling, W. Va. to increase facilities for production Fokker has just authorized the construction of a large plant to be located at Los Angeles.

It is anticipated that the new planes will be produced at the rate of one a week, as soon as the additional factory facilities are completed.

FISK OFFICIALS PLAN SALES CONFERENCE SERIES

Chicopee Falls, Mass., Sept. 26.—More than 2,500 miles will be traveled in the next month by officials of the Fisk Tire Company, Inc., who will leave this city on October 1 en route to Atlanta, Ga., to address the first of a series of regional sales conferences which will take place in cities as far west as Salt Lake City and as far south as Dallas, Tex. The conferences are held annually to acquaint salesmen with the company, its methods of manufacture, its products, its sales and its merchandising plan.

Lincoln, Neb., Sept. 26.—September collections of gasoline tax by the state treasurer's office, based on shipments received by dealers during August, set a new high mark of more than $940,000, being $97,000 more than the revenue for the preceding month, which up to this time was also a record breaker.

Davenport, Ia., Sept. 26.—Roy O. Kuehl, president of the Kuehl Motor Company, 418 East 2d St., has been appointed distributor in the tri-cities and seven adjoining counties for the Auburn car and the new Cord front drive.

GAS TAX PAYMENTS INCREASE RAPIDLY

(Continued from Page 1)

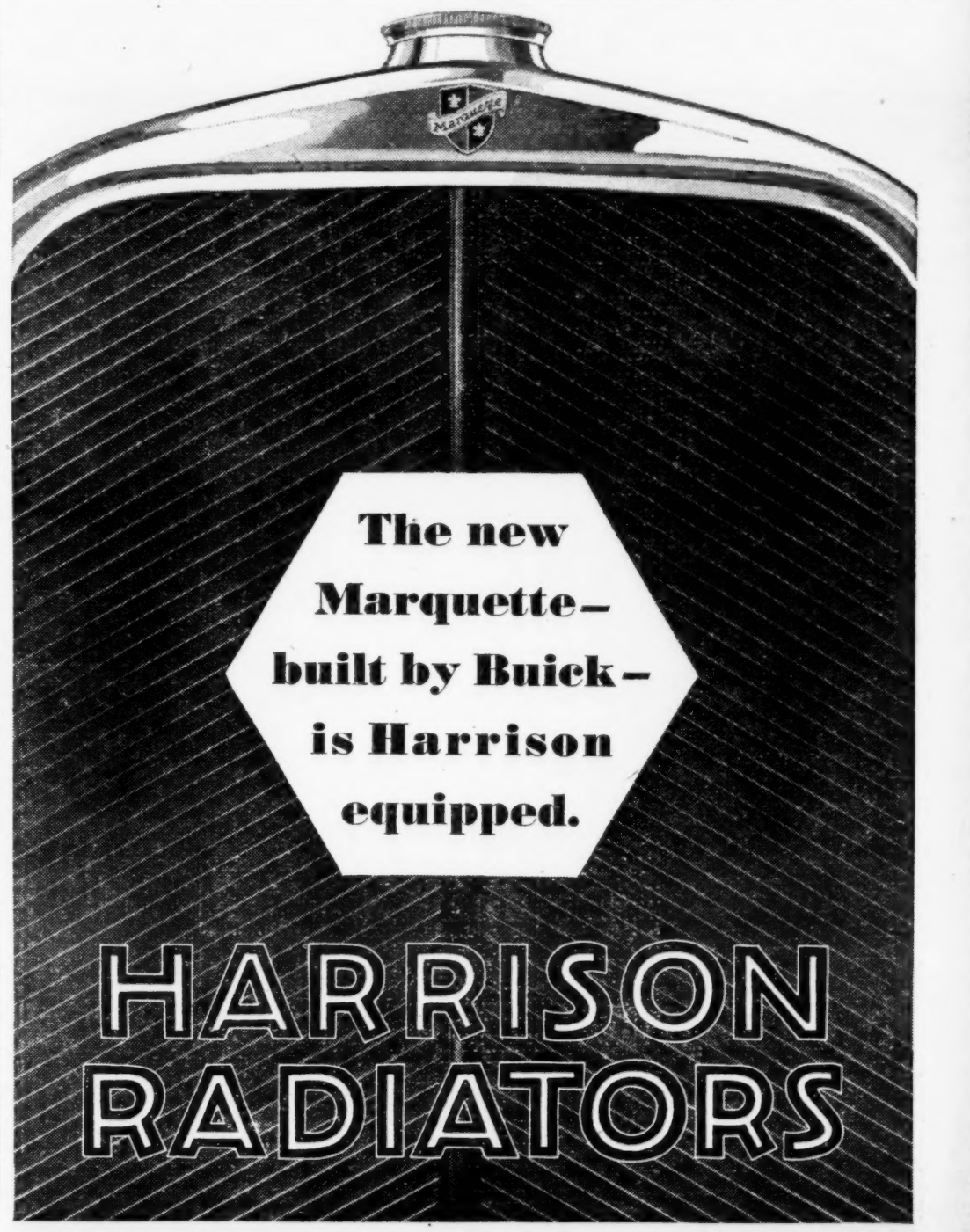
every state in the Union," the Institute has found "indicates that a reasonable gasoline tax, with revenue honestly and efficiently expended for highway construction and maintenance only, stands high in public favor. But both news and editorial columns indicate that high tax rates, diversion of revenue to numerous and unrelated ends, construction of unsuitable, temporary and 'political' highways, and the opening of gasoline tax revenue to waste and inefficiency, if not graft, have created a demand for a strict accounting."

Results of the survey are being broadcast in a booklet, "What Editors Are Saying About Gasoline Taxes."

The following tables graphically illustrate the growth of the gasoline tax since 1921:—

Tax rate per gal.	Number of States in Which Levied 1927	1928	1929	*1939
2 cents	13	13	7	3
3 "	15	14	11	8
3½ "	1	1	1	1
4 "	12	12	20	23
4½ "	1	0	0	0
5 "	5	6	7	9
6 "	0	0	3	6

* Indicated by pending or proposed legislation.

Year	Gas Tax Total	Vehicle Registr'n	Tax Per Car
1921	$ 4,700,000	10,500,000	$ .50
1922	12,100,000	12,300,000	1.00
1923	36,800,000	15,000,000	2.50
1924	79,700,000	17,600,000	4.50
1925	146,100,000	20,000,000	7.00
1926	187,600,000	22,000,000	9.00
1927	251,800,000	23,000,000	10.75
1928	305,000,000	24,500,000	13.00
*1929	450,000,000	26,000,000	17.00

* Estimated.